GOLD COAST GEOSERVICES, INC.

Engineering Geologic and Geotechnical Consultants

ENGINEERING GEOLOGIC REPORT

Proposed Lot Line Adjustment
140 Conejo Road and 180 Conejo Road
Santa Barbara, California

for:

DR. ANDREW W. GOTELLI

July 27, 2008
File No. GC07-102266

EXHIBIT E

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INTRODUCTION

This report presents the findings from an engineering geologic investigation for the proposed Lot Line Adjustment and site improvements on the property at 140 Conejo Road and 180 Conejo Road in the City of Santa Barbara. The purpose of this investigation was to determine and evaluate potential geologic hazards with respect to the proposed Tentative Map and proposed site development areas, so that we may provide suitable recommendations for use by the design and construction professionals for permitting and planning for proposed development.

SCOPE OF WORK

The scope of work for this investigation included the completion of the following tasks:

1) Review of geologic maps and reports by state and federal agencies and by consulting engineering geologists and soils engineers pertaining to this site and to adjacent properties. A list of all reports and maps reviewed and considered in preparation of this report is provided in Appendix I.

2) Reconnaissance geologic mapping of the site and its vicinity.

3) Sampling and downhole geologic logging of the earth materials encountered in seven 24-inch diameter auger borings, varying in depth from 40 - 55 feet. Bulk and undisturbed samples of the earth materials encountered in the exploratory borings were obtained and taken to the soil testing laboratory at Gold Coast GeoServices, Inc. for testing to determine pertinent engineering properties for slope stability analysis purposes.

3) Laboratory testing at Gold Coast GeoServices, Inc. to determine pertinent engineering properties of the soils and bedrock materials obtained from the exploratory borings.

4) Preparation of a Plot Plan / Geologic Map of the property to show the geologic conditions determined from this investigation, utilizing the Tentative Map For a Lot Line

Adjustment by Waters Land Surveying, Inc. as the base map.

5) Preparation of two Geologic Cross-Sections to show the surface and subsurface geologic and soils conditions determined from this investigation with respect to the proposed development envelopes for Proposed Adjusted Parcel One and for Proposed Adjusted Parcel Two.

6) Engineering geologic analysis of the assembled data with respect to the proposed Lot Line Adjustment and proposed development envelopes.

7) Preparation of this report to present a discussion of our procedures, findings, data analysis, and engineering geologic recommendations for the Tentative Map.

Geologic data and the locations of the exploratory borings are shown on the Plot Plan / Geologic Map, included as Plate 1 in the pocket attached with this report. Descriptions of the earth materials encountered in the exploratory borings are provided on the Subsurface Data Boring Logs in Appendix V. Laboratory test results are presented in Appendix II.

PROPOSED DEVELOPMENT

As shown on the Tentative Map For a Lot Line Adjustment by Waters Land Surveying, Inc., used as the base map for this study, it is proposed to create two parcels shown as Proposed Adjusted Parcel One and Proposed Adjusted Parcel Two (see Tentative Map, Plate 1 in the pocket attached with the report). A "Proposed Development Envelope" is shown for each parcel on the Tentative Map. The existing residence in Proposed Adjusted Parcel One is located within the "Proposed Development Envelope" for that parcel, and is to remain. It is our understanding that a single family residence is proposed to be constructed within the "Proposed Development Envelope" for Proposed Adjusted Parcel Two.

FINDINGS

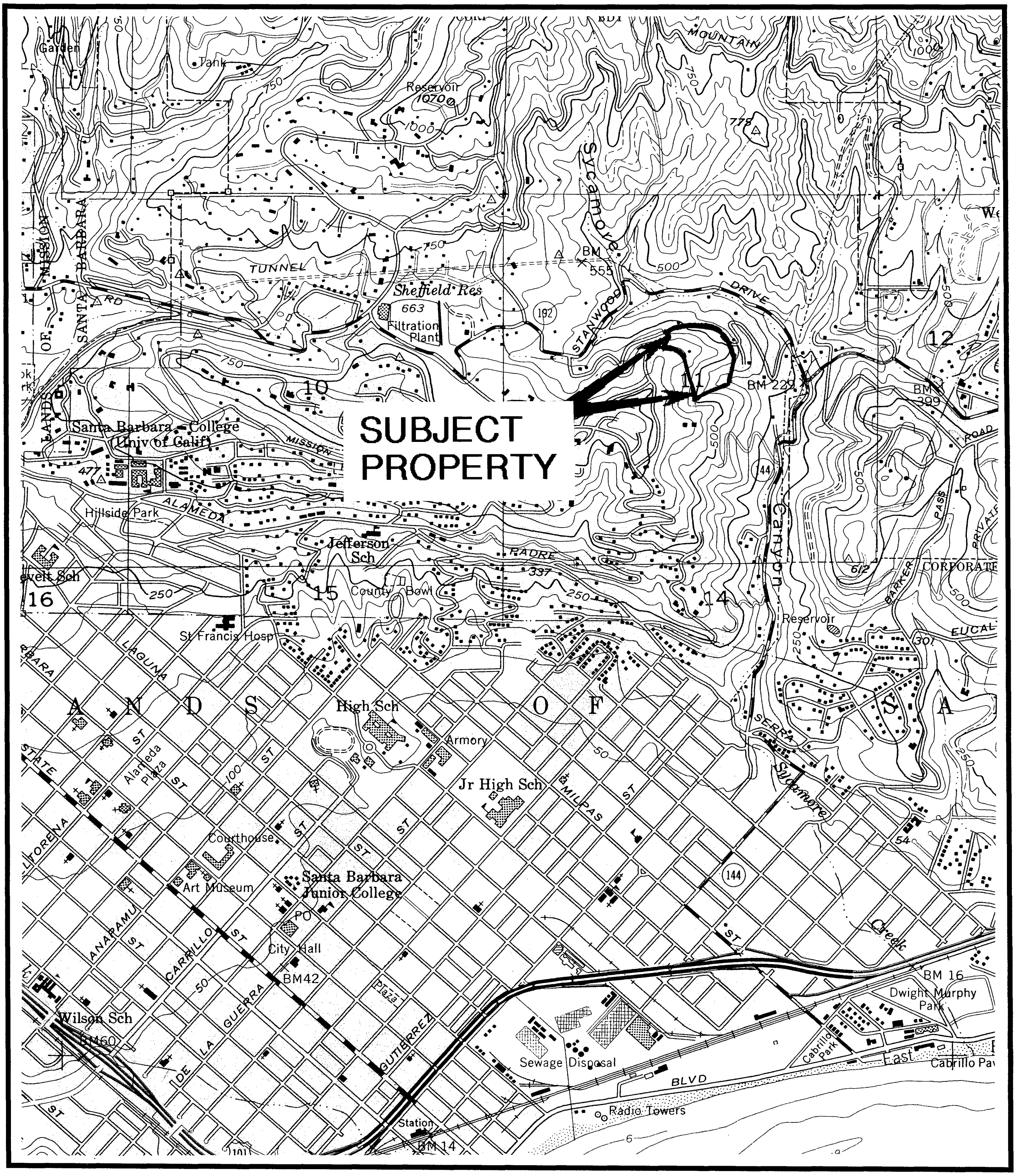
Site Description

The hillside property is located on the westerly side of Sycamore Canyon in the south foothills of the Sant Ynez Moutains (see Site Location Map, Figure 1). Conejo Road is located along the north side of Proposed Adjusted Parcel Two, and also provides vehicular access to the existing hilltop residence within Proposed Adjusted Parcel One via an existing legal easement.

The property contains a fairly broad easterly trending ridge that trends through Proposed Adjusted Parcel One. The existing residence and existing access driveway within Proposed Adjusted Parcel One are constructed on the ridge top. The existing residence was originally constructed in 1974. The residence was remodeled and deck additions were constructed in 2005-2006. The existing residence and grounds are in good repair.

Slopes descend north, east, and south from the ridge top area. The hillside within all of Proposed Adjusted Parcel Two and along the north side of Proposed Adjusted Parcel One, along the northerly side of the ridge, consists of north-northeast facing slopes varying from 4:1 to 2:1 (horizontal:vertical) slope ratio. Slopes along the southerly side of Proposed Adjusted Parcel One descend into an easterly trending tributary within Sycamore Canyon to the east. The slopes within the canyon at the south-southeasterly side of Proposed Adjusted Parcel One are steep, varying from 1.75:1 to 1.3:1 slope ratio.

Geologic Cross-Sections A-A′ and B-B′ were prepared to show the slope conditions and subsurface geologic conditions determined from this investigation with respect to the "Proposed Development Envelopes" within both parcels. Geologic Cross-Section A-A′ was extended to the base of the slope area north of Conejo Road extending to Stanwood Drive within the bottom of Sycamore Canyon using topographic data obtained from a topographic map of the Sycamore Canyon area obtained from the City of Santa Barbara Department of Building and Safety (Public Works Division).



BASE MAP: **USGS 7.5' SANTA BARBARA QUADRANGLE**
(1952, PHOTOREVISED 1988).

NORTH
NTS

GOLD COAST GEOSERVICES, INC.	**SITE LOCATION MAP** **140 CONEJO ROAD, SANTA BARBARA**	**DATE: 01-30-08** **FILE NO.: GC07-102266** **FIGURE 1**

<u>Site Geology</u>

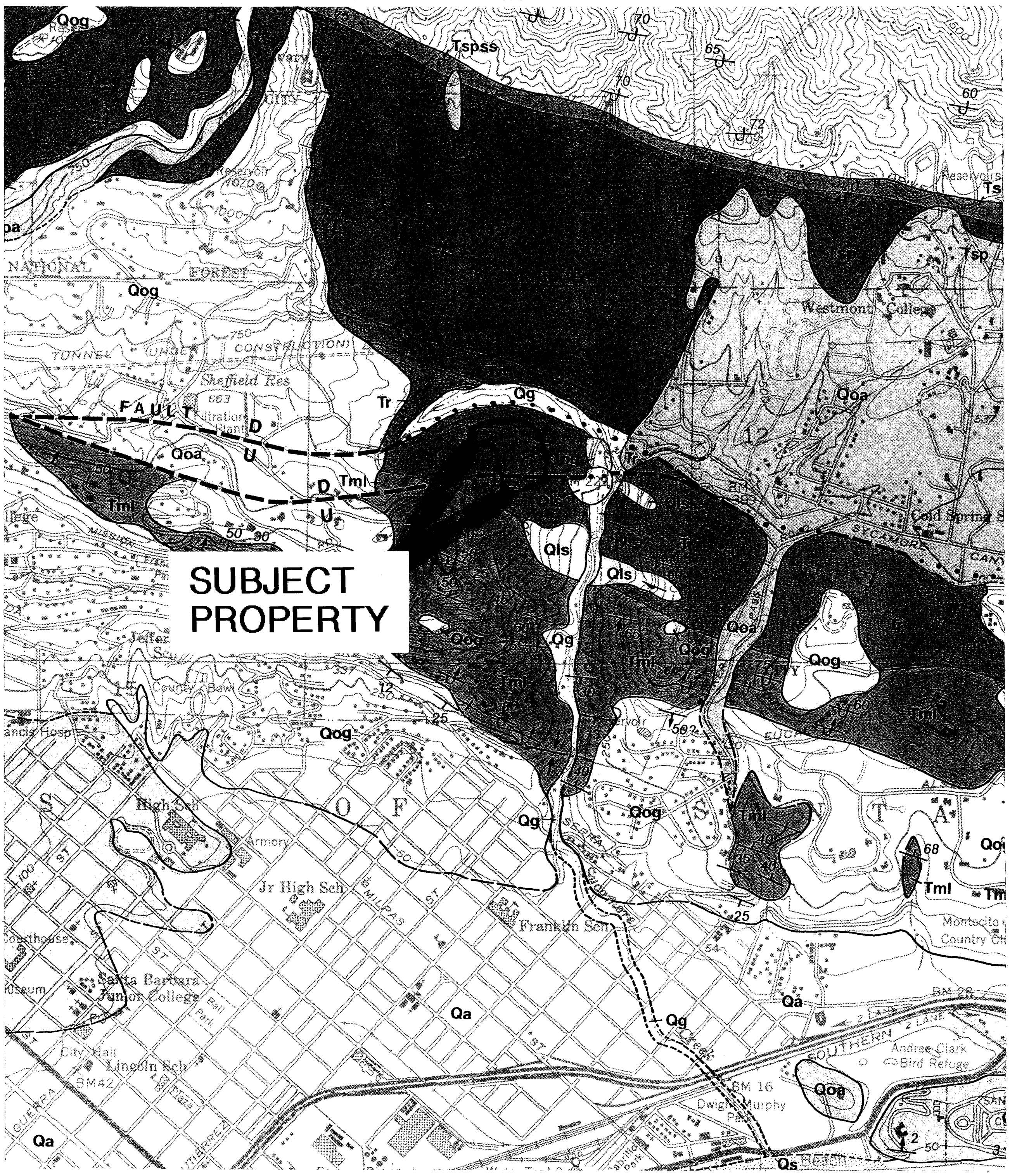
The site is located at the south front of the Santa Ynez Mountains in the California Transverse Ranges. The coastal formation occurring along the south side of the Santa Ynez Range within the property and its vicinity, named Rincon Shale, is of Lower Miocene age (approximately 18-20 million years ago) and of marine origin. The Rincon Shale is comprised of massive or poorly stratified claystone or clay shale with lesser siltstone, sandstone, and volcanic rocks. The Rincon Shale is characterized by complex fracturing or "intraformational deformation" caused by earthquakes associated with the local faults (Mission Ridge-Arroyo Parida-Santa Ana fault) and other numerous fault systems within the Transverse Ranges.

The Mission Ridge fault and fault splays associated with the Mission Ridge fault have been previously mapped by others as trending through the canyon at the south side of Proposed Adjusted Parcel Two, and along the bottom of Sycamore Canyon about 600 feet north of the property. South dipping fault splays were encountered within the underlying Rincon Shale in the exploratory borings for this investigation. The Mission Ridge fault is considered to a state designated "potentially active" fault, but the Mission Ridge fault is <u>not</u> included within a State of California Special Studies Zone for state designated "active" faults with potential for fault surface rupture hazard potential.

<u>Landslides</u>

Landslides have occurred within the Sycamore Canyon and Conejo Road area in historic time that have caused damages to property and roads. Analysis of landslide hazard potential with respect to the proposed Lot Line Adjustment and planning for future development of the site was a primary focus of this investigation.

The property is situated within the "Conejo Slide Drainage Area" designated in 1997 by the City of Santa Barbara (see Appendix IV). This site is <u>not</u> situated within designated "Conejo Slide Mass C" which was mapped off-site to the east of the subject property, downslope from this site, east of Ealand Place.



BASE MAP: THOMAS W. DIBBLEE Jr., GEOLOGIC MAP OF SANTA BARBARA QUADRANGLE (1986)

NORTH
1" = 2000'

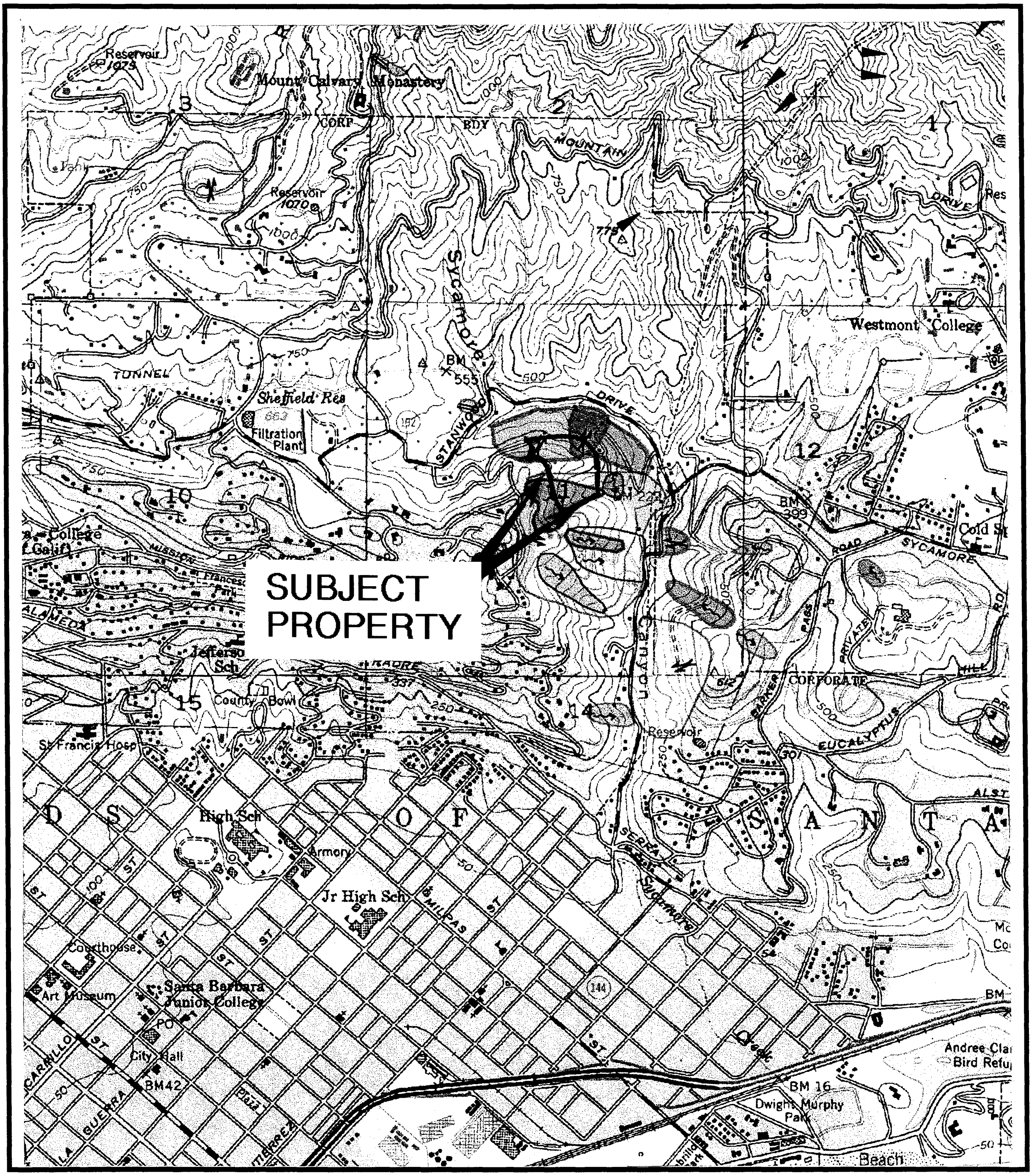
GOLD COAST GEOSERVICES, INC.	**GEOLOGIC SITE LOCATION MAP** 140 CONEJO ROAD, SANTA BARBARA	DATE: 07-29-2008 FILE NO.: GC07-102266 **FIGURE 2**

The Geologic Map of The Santa Barbara Quadrangle prepared by Dibblee (1986) does <u>not</u> show any landslides within this property.

The *Landslide Hazard Maps of Southeastern Santa Barbara County, California* (DMG Open-File Report 99-12, 2000) show landslides within and adjacent to the property (see Figure 3). The mapped landslides are designated as either dormant or as "active or historic". The landslide limits shown on the 2000 DMG map were established on the basis of their "landforms", as determined by observation by a field geologist or by aerial photographic interpretation by a geologist. The mapped landslide areas were not verified by subsurface exploration. The text with the maps indicated that a site-specific investigation by an engineering geologist is required to evaluate landslide hazard potential.

The Rincon Shale stratification underlying this site and adjoining land areas are shown in most reports and on most geologic maps to be predominantly south dipping at high angles varying from about 60-90 degrees. The geologic structure of the Rincon Shale is therefore considered to be favorable against landslide development by translational failure such as along daylighted bedding planes, due to the lack of daylighted bedding plane conditions on or adjacent to the property.

Geomorphologic indicators of soil slippage and/or shallow soil slumps, including hummocky terrain and low, approximate 2-4 foot high scarps, are evident along the lower slope area at the north-northeast side of Proposed Adjusted Parcel Two and at the east-southeast side of Proposed Adjusted Parcel One. The soil slip areas are indicated on the Plot Plan / Geologic Map with this report. No geomorphologic evidence of deep landslide movement was observed, and no evidence of deep landslide movement was encountered during downhole geologic logging of the exploratory borings for this investigation.



BASE MAP: DMG OPEN FILE REPORT 99-12, PLATE 2B (2000)

LANDSLIDE HAZARD MAPS OF SOUTHERN SANTA BARBARA COUNTY, CALIFORNIA

NORTH
1" = 1000'

GOLD COAST GEOSERVICES, INC.	**GEOLOGIC SITE LOCATION MAP** 140 CONEJO ROAD, SANTA BARBARA	DATE: 07-29-2008 FILE NO.: GC07-102266 FIGURE 3

Site Drainage

Site drainage is by topographically controlled sheetflow runoff. Concentrated drainage occurs within the unnamed, east-trending canyon (a tributary of Sycamore Canyon) at the southeast side of Proposed Adjusted Parcel One.

DISCUSSION OF FINDINGS FROM SUBSURFACE INVESTIGATION

In order to classify and evaluate the subsurface soils and geologic conditions, a total of seven exploratory borings varying from 40-55 feet in depth were drilled at the locations shown on the Plot Plan / Geologic Map with this report. The earth materials encountered in the exploratory borings are classified as native soil (residual soil), and underlying Rincon Shale. No artificial fill was encountered in the exploratory borings, however it is noted that fill is likely to be present within the area of the existing access road and in the area of the existing residence from past light grading and site development of the existing single family residence. Descriptions of the earth materials encountered in the exploratory borings are presented on the attached Subsurface Data Boring Logs, and are summarized as follows.

Native Soil (Ns)

A one to five foot thick zone of native soil (undifferentiated residual soil and colluvium) conceals the underlying Rincon Shale across the site. The native soil is dark to very dark grayish brown to black, comprised of sandy and gravelly clay. The soil is typically moist to very moist, highly plastic, and highly expansive. The soil is considered to be creep-prone and is unsuitable as foundation bearing material. It is recommended that foundation elements for any proposed future structures penetrate the soil material and derive bearing support from the underlying dense Rincon Shale.

Rincon Shale (Tr)

The site is underlain by Rincon Shale of marine origin. The Rincon Shale consists mostly of dark grayish brown, dark yellowish/reddish brown, or gray clay shale, claystone, clayey siltstone, with lesser sandstone and tuffaceous sandstone. The Rincon Shale was found to contain complex fractures, breccia, and varying degree of chemical weathering effects. Clay beds were carefully evaluated for evidence of deformation by landslide movement, and no evidence of deformation by landslide movement was encountered. The fractures and breccia encountered within the underlying Rincon Shale is considered to be a result of tectonic movement coupled with long term rock degradation by chemical weathering effects.

Geologic Structure

The Rincon Shale is typified by thick bedding and complex fractures. The Rincon Shale is found to be mostly thickly bedded. Where evident, bedding structure can be deciphered by iron oxide staining along bedding and some siltstone and sandstone beds exhibit bedding structure. Bedding and fold structures are typically obscured by closely spaced fractures. Mineralization along fractures and along bedding is common, with many fractures and bedding planes lined with calcite, quartz, gypsum, and iron oxide or manganese staining.

General geologic structure is shown on the Geologic Cross-Sections with this report. No daylighted bedding planes or daylighted geologic structures were encountered from downhole geologic logging of the exploratory borings, however south dipping structures were encountered in borings B-1, B-4, and B-5.

Faulting and Seismicity

This site is not situated within a State of California Special Studies Zone. The Rincon Shale contains numerous deformation structures resulting from long term tectonic movement associated with the numerous fault systems within the Tranverse Ranges. Shearing, rock fratures, and clay gouge was encountered at various depths in most of the borings. All shear surfaces and clay gouge was found to dip south at moderate to high angles. The shears, fractures, and clay gouge is considered to be associated with past tectonic movement along the Mission Ridge-Arroyo Parida fault, an east-west trending dip-slip fault that has been previously mapped as trending through or near this property.

The State Geologist (FER-31,1977) classified the Mission Ridge fault as a potentially active fault (probable movement within the past 2 million years), but did not find evidence to classify the Mission Ridge fault as an active fault for Special Studies (no evidence of fault movement or displacement within the past 11,000 years).

Seismic Hazards

Seismically-induced hazards including rockfall, liquefaction, seismically-induced landslides, seismically-induced ground settlement, seiches, and tsunamis, have been evaluated. Analysis and discussion of these potential seismic hazards are as follows.

Rockfall and Seismically-induced Landslide Hazard

The site location is not subject to rockfall hazard due to the lack of boulders on the slopes at and adjacent to the site.

The slope stability analysis performed for Proposed Adjusted Parcel Two indicated adequate factors of safety against seismically-induced landslide hazard, as discussed in the slope stability analysis section of this report.

The slopes within the canyon at the south side of Proposed Adjusted Parcel One do not have adequate factors of safety against seismically-induced landslide hazard. A "Restricted Use Area" is recommended within the canyon at the south side of Proposed Adjusted Parcel One due to the seismically-induced landslide hazard potential in this area. Special studies will be required by an engineering geologist and/or a geotechnical engineer to provide recommendations for mitigation of landslide hazards if any future development is proposed within the "Restricted Use Area".

Liquefaction

Liquefaction is the process whereby saturated fine-grained sand, typically less than about 10,000 years old, acquires a degree of mobility and loss of bearing strength when subjected to strong ground shaking such as during an earthquake. Liquefaction results in ground settlement and lateral ground displacement. This site is underlain by Rincon Shale of Miocene age, which is not a potentially liquefiable formation due to its age, lithology, and high degree of consolidation.

2007 CBC Seismic Design Parameters

Seismic design coefficients and parameters for the project sites have been determined utilizing the "Java Ground Motion Parameter Calculator" (Version 5.0.8) developed by the United States Geologic Survey (USGS). The program incorporates seismic provisions set forth in the 2007 California Building Code (CBC) and 2006 International Building Code (IBC) procedures, including site classification per CBC Table 1613.5.2, mapped acceleration parameters per CBC Figures 1613.5 (1) through 1613.5 (14), and site coefficients per CBC Table 1613.5.3 (1) and 1613.5.3 (2). The following seismic parameters were determined.

Seismic Use Group	Site Classification	Spectral Response Accelerations		Site Seismic Coefficients	
		SMs	SM1	Fa	Fv
II	B	2.162	0.848	1.0	1.0

SLOPE STABILITY ANALYSIS

Slope stability analysis was performed to determine the factors of safety against slope failure of the slope area within the Proposed Development Envelope for Proposed Adjusted Parcel Two. The shear strength parameters used in the slope stability analysis were determined from results of direct shear tests on samples obtained from the exploratory borings (see attached Laboratory Test Results).

The factors of safety against slope failure were determined using the XSTABL slope stability computer software program. The slope stability analysis was performed along Geologic Cross-Section A-A', assuming circular failure mode for all cases. The XSTABL program presents the 10 most critical failure planes in the output file. The output file has a summary of the input file and the coordinate of several points on the most critical failure plane. The most critical failure surfaces that yield the lowest factors of safety for each cross-section determined from the analysis are plotted onto the Geotechnical Cross-Section with this report.

The results of the slope stability analysis indicate that the safety factors against deep-seated slope failure exceed the minimum accepted static safety factor of 1.5. The factors of safety exceed the minimum pseudo-static or seismic safety factor of 1.1 in consideration of seismically-induced landslide hazard potential. The calculated factors of safety are considered to be adequate for the proposed development area within Proposed Adjusted Parcel Two.

CONCLUSIONS AND RECOMMENDATIONS

The findings of this investigation indicate that the property is suitable from an engineering geologic standpoint for the proposed Lot Line Adjustment and for development within the areas shown on the Tentative Map prepared by Waters Land Surveying, Inc. Based upon the findings, the following recommendations are provided for consideration by the design professionals for any future development of the site.

1. RESTRICTED USE AREA

The slopes within the canyon at the south side of Proposed Adjusted Parcel One do not have adequate factors of safety against seismically-induced landslide hazard. The slopes along the north-northeast side of Proposed Adjusted Parcel Two show evidence of soil slippage within the areas shown on the Plot Plan / Geologic Map with this report. A "Restricted Use Area" is recommended within the slope areas at the south and east sides of Proposed Adjusted Parcel One, and along the north side of Proposed Adjusted Parcel One and Proposed Adjusted Parcel Two due to the seismically-induced landslide hazard potential and soil slip hazard potential in this area of the property. The recommended "Restricted Use Area" is shown on Plate 1.2 with this report. Special studies will be required by an engineering geologist and/or a geotechnical engineer to provide recommendations for mitigation of landslide hazards if any future development is proposed within the "Restricted Use Area".

2. EXPANSIVE SOILS

Based on expansion index test results, the surface soils on this property are in the ***high*** expansion index range (E.I.=106). Expansive soils are those which contain clay minerals which change in volume (shrink or swell) due to variations in soil moisture content. When there is a change in the soil moisture content there will be soil movement with anticipated shrinking or swelling phenomenon on the order of several inches. Soils moisture fluctuations resulting in differential shrinking or swelling can cause significant damage to foundation systems, concrete slabs-on-grade, and concrete flatwork.

The following minimum recommendations are provided for consideration by the design and construction professionals for any planned development.

1. Positive drainage shall be established and maintained at all times. Leaking irrigation lines shall be immediately investigated and repaired.

2. Trees shall be planted away from the structures or flatwork at an adequate distance, so that roots cannot draw moisture from the subgrade soils which may result in shrinkage and settlement. Low water demanding trees and shrubs shall be utilized.

3. If planters are located adjacent to structures and/or concrete flat work, they shall be constructed so that irrigation water will not saturate the soils underlying the footings and slabs, as excessive saturation of soils beneath the footings and slabs due to poor drainage may result in concrete and structural damage.

4. It is recommended that concrete slabs-on-grade utilized for any flatwork, such as patios, walkways and driveways, be provided with a thickened edge in order to reduce the potential for moisture content fluctuations within the slab subgrade soils. *(Specific recommendations shall be provided once final building plans are available.)*

5. The building pad, driveway, and lot surface drainage must be collected and/or directed away from footings, slope faces, and the building sites to an approved drainage disposal site via non-erosive drainage devices. It is recommended that all structures be provided with roof gutters and down spouts that transfer all drainage away from the footings and building site. Drainage shall <u>not</u> be allowed to pond on or adjacent to the building sites.

3. FOUNDATION SYSTEMS

It is recommended that proposed structures be supported using foundation systems that derive bearing support from underlying dense Rincon Shale. Dense Rincon Shale typically occurs at depths exceeding about 20-25 feet, so that deepened foundation systems consisting of drilled cast-in-place concrete friction piles interconnected with grade beams and structural slabs are recommended. The actual foundation system shall be designed by the project structural engineer with specific foundation design recommendations from a soils engineer.

4. PLAN REVIEW

The design and construction professionals for the project should consult with the engineering geologist and with a soils engineer during the planning and construction phases of any future site improvements or site development. The recommendations contained in this report may need to be revised and additional site investigation work may be necessary pending the final scope of the building plans.

5. OBSERVATIONS AND TESTING

It is recommended that all phases of site preparations and foundation construction work be observed and approved by the engineering geologist and a soils engineer, to verify that the work conforms with the recommendations in the supporting reports. The following minimum observations and testing by an engineering geologist and soils engineer are recommended during any future site development.

1. All areas to receive compacted fill shall be observed and approved prior to placement of compacted fill.

2. Any earth materials that are to be imported to the site shall be observed and approved prior to transport to the site.

3. Any fill placed for engineering purposes should be tested and certified by a soils engineer.

4. Surface and subsurface drainage systems shall be observed and approved.

5. Excavations for foundation construction shall be observed and approved, prior to the placement of steel or concrete.

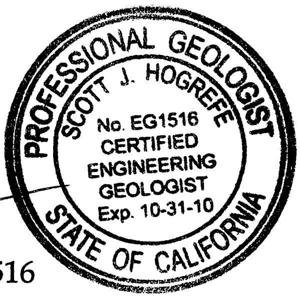
REMARKS

This report is issued with the understanding that it is the responsibility of the owner, or their representative, to assure that the information and recommendations contained herein are called to the attention of the designers and builders for the project. The conclusions and recommendations provided in this report shall be reviewed by us when the construction plans become available, and may need to be revised or modified after our review.

Please be informed that the conclusions and recommendations provided in this preliminary report are based on the surface conditions and findings and observations made at the locations of the exploratory excavations at the time of the site investigation. For the purposes of this report it can only be assumed that the subsurface conditions do not deviate significantly in the unexplored areas of the property from those at the exposed locations. If conditions are encountered during future development which are found to be different from those described in this report, the engineering geologist must be notified to consider the need for revisions or modifications to the recommendations in this preliminary report.

Please call this office at (805) 484-5070 if you have any questions regarding this report. Thank you for the opportunity to be of professional service on this project.

Respectfully submitted,
GOLD COAST GEOSERVICES, INC.



Scott J. Hogrefe, CEG 1516

APPENDIX I

REFERENCES CITED

a. Dibblee, T.W., Jr., 1986, Geologic map of the Santa Barbara Quadrangle, Santa Barbara County, California: Dibblee Geological Foundation, 1:24,000.

b. Dibblee, T.W., Jr., Geology of the Santa Ynez-Topatopa Mountains, Southern California, in *Geology and Mineral Wealth of the California Transverse Ranges*, published by South Coast Geological Society, 1982, pp. 41-56.

c. California Division of Mines and Geology, 2000, *Landslide Hazard Maps of Southeastern Santa Barbara County, California*, DMG Open-File Report 99-12.

d. California Division of Mines and Geology, Fault Evaluation Report FER-31, Mission Ridge-Arroyo Parida fault (Santa Barbara County), April 11, 1977.

APPENDIX II

LABORATORY TEST RESULTS

Soil testing was performed at Gold Coast GeoServices, Inc. laboratory on samples of the earth materials obtained from the exploratory borings to determine engineering properties for evaluation of site slope stability. In-situ soil samples were obtained using a Modified California Sampler. Test procedures and results are as follows.

Maximum Dry Density and Optimum Moisture Content

Maximum dry density and optimum moisture data were determined in the laboratory for the significant soil types encountered in accordance with ASTM D-1557. The results are as follows:

Sample	Soil Description	Soil Type (USCS)	Maximum Dry Density (LBS./CU.FT)	Optimum Moisture (%)
B-7@0'-2'	silty clay	CH	96	24

Expansion Test

Expansion index testing was performed on soil within the proposed building area using the expansion index test procedure from the Uniform Building Code (UBC) section 18-2 and ASTM standard D4829. The test results are as follows:

SOIL TYPE	LOCATION	EXPANSION INDEX
silty clay	B-7@0'-2'	106

IN-SITU DENSITY AND MOISTURE TEST (Ring Density Method)

In-situ dry density and moisture content were determined for each of the undisturbed samples obtained from the borings. The test results are plotted on the boring logs at the sampled locations.

Direct Shear

Direct shear tests were performed on in-situ samples of the soil and Rincon Shale materials encountered in the exploratory excavations. Testing was performed using the *ShearTrac II-DSS System* by *Geocomp Corporation* in accordance with the drained shear test procedure. The samples were cut in 1.0" thick, 2.4" diameter brass rings, and soaked for a minimum of 24 hours in a water bath under a normal load to saturated condition prior to testing. The samples were sheared at a maximum constant deformation rate of 0.005 inches/minute. Increasing vertical stresses were applied to determine the cohesion and internal angle of friction for the samples tested. The test results are plotted on the attached "Direct Shear Test" graphs.

DIRECT SHEAR

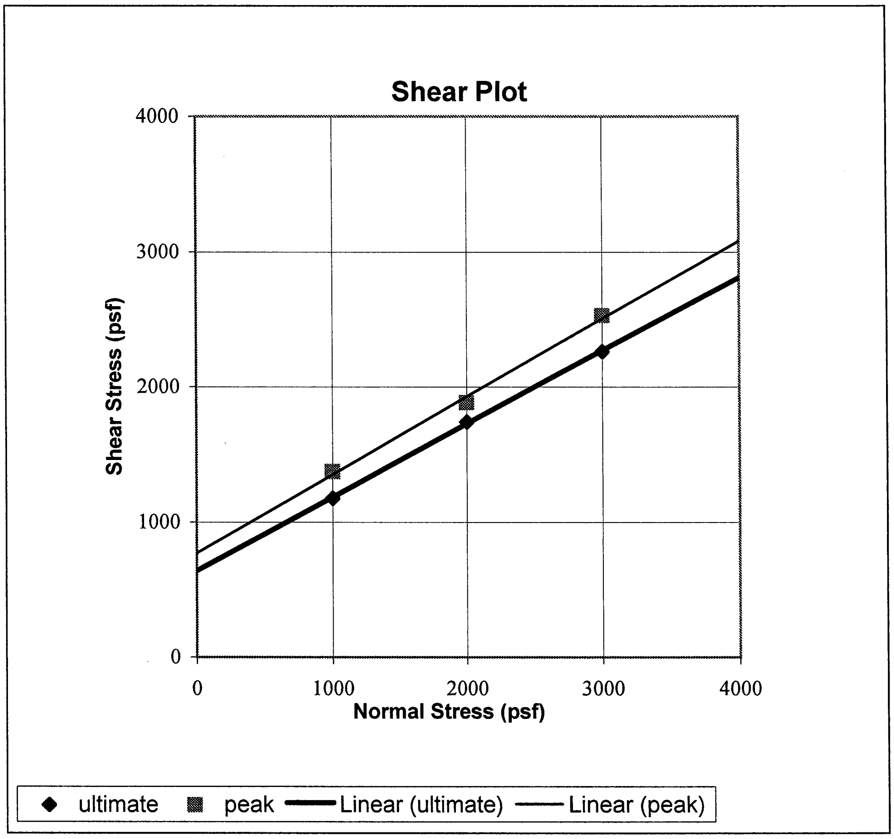
PROJECT LOCATION: 140 Conejo Road, Santa Barbara **FILE NO.:** GC07-102266

CLASSIFICATION: Clay shale **SAMPLE:** B-1 @ 20'

PLOTTED BY: KM **CHECKED BY:** HF/SH **DATE:** 4/21/2008

SHEAR DATA			
Ultimate		Peak	
Normal Stress (psf)	Shear Stress (psf)	Normal Stress (psf)	Shear Stress (psf)
1000	1174	1000	1372
2000	1739	2000	1880
3000	2259	3000	2527

X	**UNDISTURBED**
	REMOLDED
	REPEATED
X	**ULTIMATE**
X	**PEAK**



SAT. WATER CONTENT 26.3 %

NATURAL WATER CONTENT 24.2 %

DISPLACEMENT RATE 0.005 in/min.

REMOLDED TO ____ %

SAT. UNIT WEIGHT 123.9 pcf.

WET UNIT WEIGHT 121.8 pcf.

DRY UNIT WEIGHT 98.1 pcf.

Direct Shear Results	Ultimate	Peak	
ANGLE OF INTERNAL FRICTION, ϕ	28.5	30.0	deg.
COHESION, c	639.0	771.0	psf.

Shear testing was performed using the *SHEARTRACK II SYSTEM* by *GEOCOMP, Inc.*

GOLD COAST GEOSERVICES, Inc.

5217 VERDUGO WAY, SUITE B * CAMARILLO, CA 93012

Per ASTM D3080 **PLATE:** S-1

DIRECT SHEAR

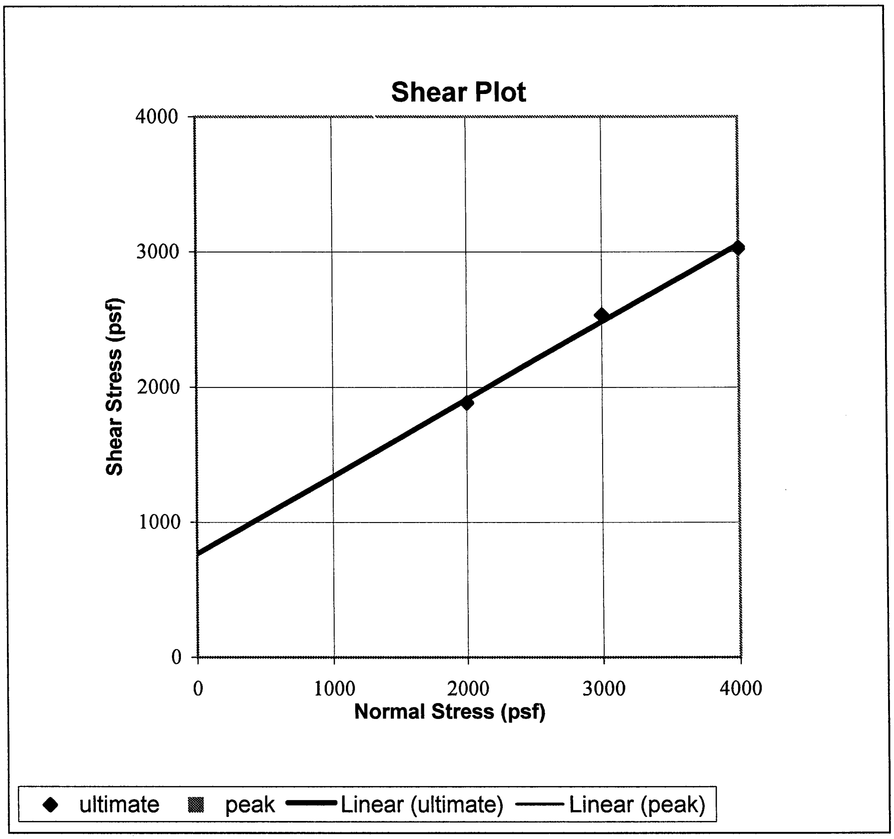
PROJECT LOCATION: 140 Conejo Road, Santa Barbara **FILE NO.:** GC07-102266

CLASSIFICATION: Clay shale **SAMPLE:** B-1 @ 30'

PLOTTED BY: KM **CHECKED BY:** HF/SH **DATE:** 4/16/2008

SHEAR DATA			
Ultimate		Peak	
Normal Stress (psf)	Shear Stress (psf)	Normal Stress (psf)	Shear Stress (psf)
2000	1884	2000	
3000	2530	3000	
4000	3028	4000	

X **UNDISTURBED**
REMOLDED
REPEATED
X **ULTIMATE**
X **PEAK**



SAT. WATER CONTENT 25.3 %
NATURAL WATER CONTENT 24.2 %
DISPLACEMENT RATE 0.005 in/min.
REMOLDED TO ___ %

SAT. UNIT WEIGHT 123.5 pcf.
WET UNIT WEIGHT 122.5 pcf.
DRY UNIT WEIGHT 98.6 pcf.

Direct Shear Results	Ultimate	Peak	
ANGLE OF INTERNAL FRICTION, ϕ	29.7		deg.
COHESION, c	764.0		psf.

Shear testing was performed using the *SHEARTRACK II SYSTEM* by *GEOCOMP, Inc.*

GOLD COAST GEOSERVICES, Inc.

5217 VERDUGO WAY, SUITE B * CAMARILLO, CA 93012

Per ASTM D3080 **PLATE:** S-2

DIRECT SHEAR

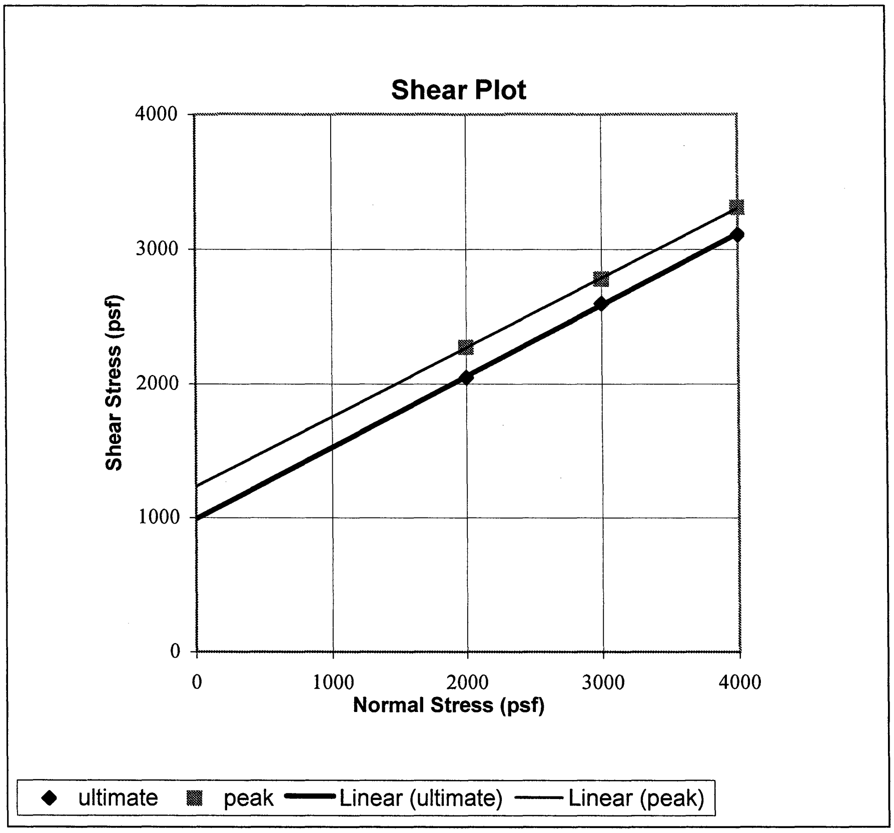
PROJECT LOCATION: 140 Conejo Road, Santa Barbara **FILE NO.:** GC07-102266

CLASSIFICATION: Clay shale **SAMPLE:** B-2 @ 30'

PLOTTED BY: KM **CHECKED BY:** HF/SH **DATE:** 4/15/2008

SHEAR DATA			
Ultimate		Peak	
Normal Stress (psf)	Shear Stress (psf)	Normal Stress (psf)	Shear Stress (psf)
2000	2044	2000	2272
3000	2597	3000	2780
4000	3108	4000	3309

X **UNDISTURBED**
REMOLDED
REPEATED
X **ULTIMATE**
X **PEAK**



SAT. WATER CONTENT 24.4 %
NATURAL WATER CONTENT 20.2 %
DISPLACEMENT RATE 0.005 in/min.
REMOLDED TO ____ %

SAT. UNIT WEIGHT 124.6 pcf.
WET UNIT WEIGHT 120.4 pcf.
DRY UNIT WEIGHT 100.2 pcf.

Direct Shear Results	Ultimate	Peak	
ANGLE OF INTERNAL FRICTION, ϕ	28.0	27.4	deg.
COHESION, c	987.0	1231.0	psf.

Shear testing was performed using the *SHEARTRACK II SYSTEM* by *GEOCOMP, Inc.*

GOLD COAST GEOSERVICES, Inc.

5217 VERDUGO WAY, SUITE B * CAMARILLO, CA 93012

Per ASTM D3080 **PLATE:** S-3

COMPOSITE DIRECT SHEAR

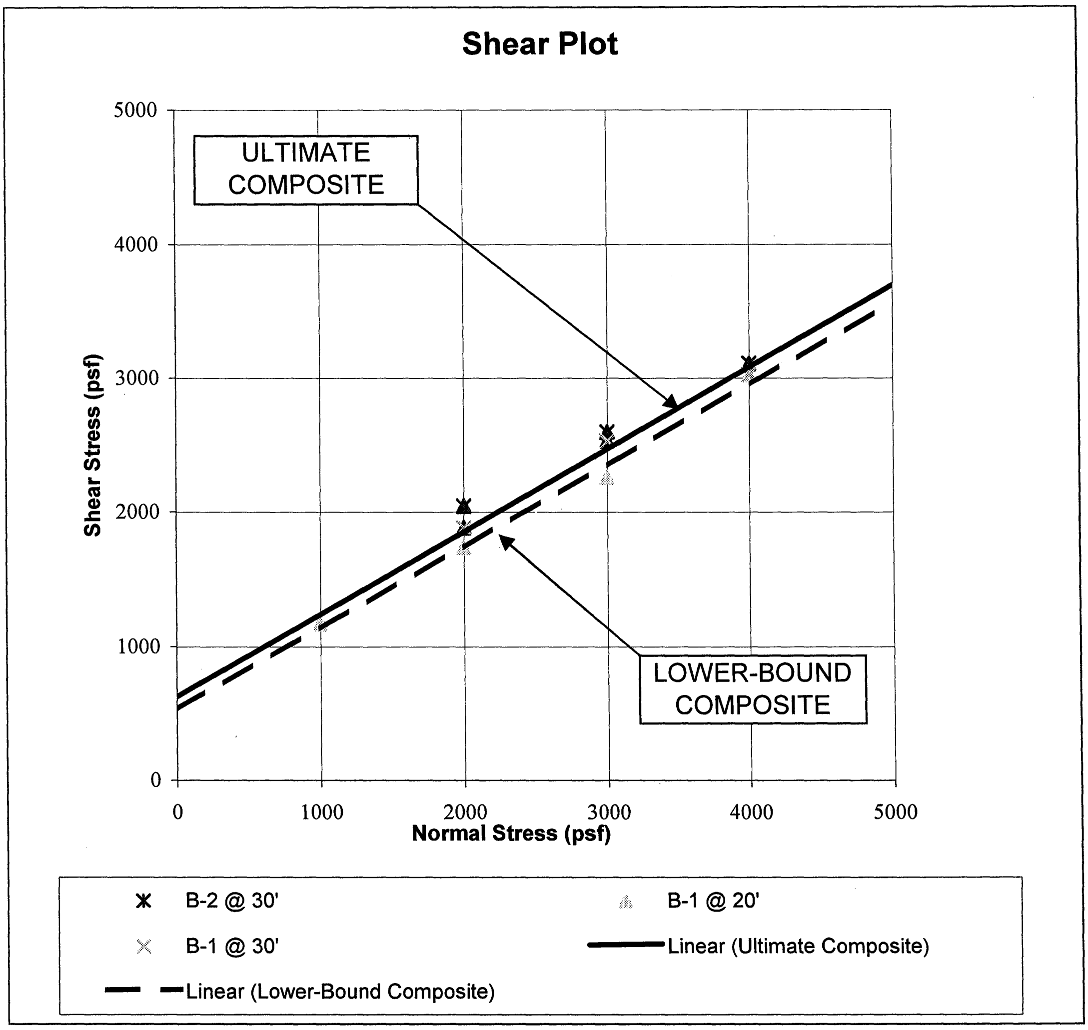
PROJECT LOCATION: 140 Conejo Road, Santa Barbara **FILE NO.:** GC07-102266

CLASSIFICATION: Clay shale **SAMPLE:** COMPOSITE

PLOTTED BY: JER **CHECKED BY:** SH/ST **DATE:** 4/22/2008

SHEAR DATA		
COMPOSITE SHEAR STRENGTH PARAMETERS DETERMINED FROM SAMPLES:		
B-2 @ 30'	B-1 @ 20'	B-1 @ 30'

X **UNDISTURBED**
REMOLDED
REPEATED
X **ULTIMATE**
PEAK



Direct Shear Results	Ult. Comp.	Lower-Bound	
ANGLE OF INTERNAL FRICTION, ϕ	31.5	31.3	deg.
COHESION, c	626.0	529.0	psf.

Shear testing was performed using the *SHEARTRACK II SYSTEM* by *GEOCOMP, Inc.*

GOLD COAST GEOSERVICES, Inc.
5217 VERDUGO WAY, SUITE B * CAMARILLO, CA 93012

Per ASTM D3080 **PLATE:** C-1

APPENDIX III

SLOPE STABILITY ANALYSIS DATA PRINTOUT SHEETS

XSTABL File: 2266ACS2   7-31-08   4:28

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*****************************************
*              X S T A B L              *
*                                       *
*        Slope Stability Analysis       *
*              using the                *
*           Method of Slices            *
*                                       *
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Problem Description : **140 CONEJO ROAD, SANTA BARBARA, DETERMINE FACTOR OF SAFETY ALONG CROSS-SECTION A-A, ASSUME CIRCULAR FAILURE, STATIC CONDITION**

SEGMENT BOUNDARY COORDINATES

----

20 SURFACE boundary segments

Segment No.	x-left (ft)	y-left (ft)	x-right (ft)	y-right (ft)	Soil Unit Below Segment
1	.0	335.0	35.0	330.0	1
2	35.0	330.0	50.0	331.0	1
3	50.0	331.0	75.0	350.0	1
4	75.0	350.0	180.0	390.0	1
5	180.0	390.0	188.0	400.0	1
6	188.0	400.0	280.0	425.0	1
7	280.0	425.0	310.0	440.0	1
8	310.0	440.0	330.0	450.0	1
9	330.0	450.0	405.0	494.0	1
10	405.0	494.0	475.0	494.0	1
11	475.0	494.0	492.0	500.0	1
12	492.0	500.0	505.0	507.0	1
13	505.0	507.0	525.0	508.0	1
14	525.0	508.0	680.0	550.0	1
15	680.0	550.0	805.0	600.0	1
16	805.0	600.0	907.0	640.0	1
17	907.0	640.0	925.0	640.0	1
18	925.0	640.0	960.0	660.0	1
19	960.0	660.0	1000.0	665.0	1
20	1000.0	665.0	1050.0	665.0	1

ISOTROPIC Soil Parameters
----

1 Soil unit(s) specified

Soil Unit No.	Unit Weight Moist (pcf)	Unit Weight Sat. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Parameter Ru	Pore Pressure Constant (psf)	Water Surface No.
1	121.8	123.9	639.0	28.50	.000	.0	1

1 Water surface(s) have been specified

Unit weight of water = 62.40 (pcf)

Water Surface No. 1 specified by 2 coordinate points

****
PHREATIC SURFACE,
****

Point No.	x-water (ft)	y-water (ft)
1	50.00	331.00
2	1050.00	565.00

A critical failure surface searching method, using a random technique for generating CIRCULAR surfaces has been specified.

500 trial surfaces will be generated and analyzed.

10 Surfaces initiate from each of 50 points equally spaced along the ground surface between x = 50.0 ft
and x = 900.0 ft

Each surface terminates between x = 950.0 ft
and x = 1040.0 ft

Unless further limitations were imposed, the minimum elevation at which a surface extends is y = .0 ft

* * * * * DEFAULT SEGMENT LENGTH SELECTED BY XSTABL * * * * *

34.0 ft line segments define each trial failure surface.

Factors of safety have been calculated by the :

* * * * *   SIMPLIFIED BISHOP METHOD   * * * * *

The most critical circular failure surface
is specified by 34 coordinate points

Point No.	x-surf (ft)	y-surf (ft)
1	50.00	331.00
2	81.50	318.20
3	113.54	306.83
4	146.07	296.92
5	179.00	288.48
6	212.28	281.54
7	245.85	276.10
8	279.62	272.17
9	313.53	269.77
10	347.52	268.90
11	381.52	269.57
12	415.45	271.76
13	449.24	275.48
14	482.84	280.71
15	516.16	287.46
16	549.15	295.69
17	581.73	305.41
18	613.84	316.58
19	645.42	329.18
20	676.40	343.20
21	706.71	358.59
22	736.30	375.34
23	765.11	393.40
24	793.07	412.74
25	820.14	433.32
26	846.25	455.10
27	871.35	478.03
28	895.40	502.07
29	918.33	527.16
30	940.12	553.27
31	960.71	580.32
32	980.06	608.28
33	998.13	637.08
34	1013.93	665.00

****   Simplified BISHOP FOS =   1.605   ****

The following is a summary of the TEN most critical surfaces

Problem Description : 140 CONEJO RD, SB, SEC-A, GRS-CR,STT

	FOS (BISHOP)	Circle Center x-coord (ft)	Circle Center y-coord (ft)	Radius (ft)	Initial x-coord (ft)	Terminal x-coord (ft)	Resisting Moment (ft-lb)
1.	1.605	349.83	1023.76	754.86	50.00	1013.93	5.951E+09
2.	1.637	350.99	951.65	689.79	50.00	976.91	5.301E+09
3.	1.649	144.13	1563.76	1236.35	50.00	991.93	6.011E+09
4.	1.658	316.55	1216.88	893.79	84.69	1019.41	5.454E+09
5.	1.668	291.90	1337.85	1005.74	84.69	1039.35	5.990E+09
6.	1.671	301.01	1211.85	885.00	84.69	996.45	5.010E+09
7.	1.690	321.93	1225.23	892.44	102.04	1016.58	5.176E+09
8.	1.699	194.12	1457.51	1120.52	67.35	984.09	5.341E+09
9.	1.700	384.89	962.10	678.44	84.69	994.24	4.982E+09
10.	1.701	407.95	934.74	681.74	67.35	1033.93	6.120E+09

* * * END OF FILE * * *

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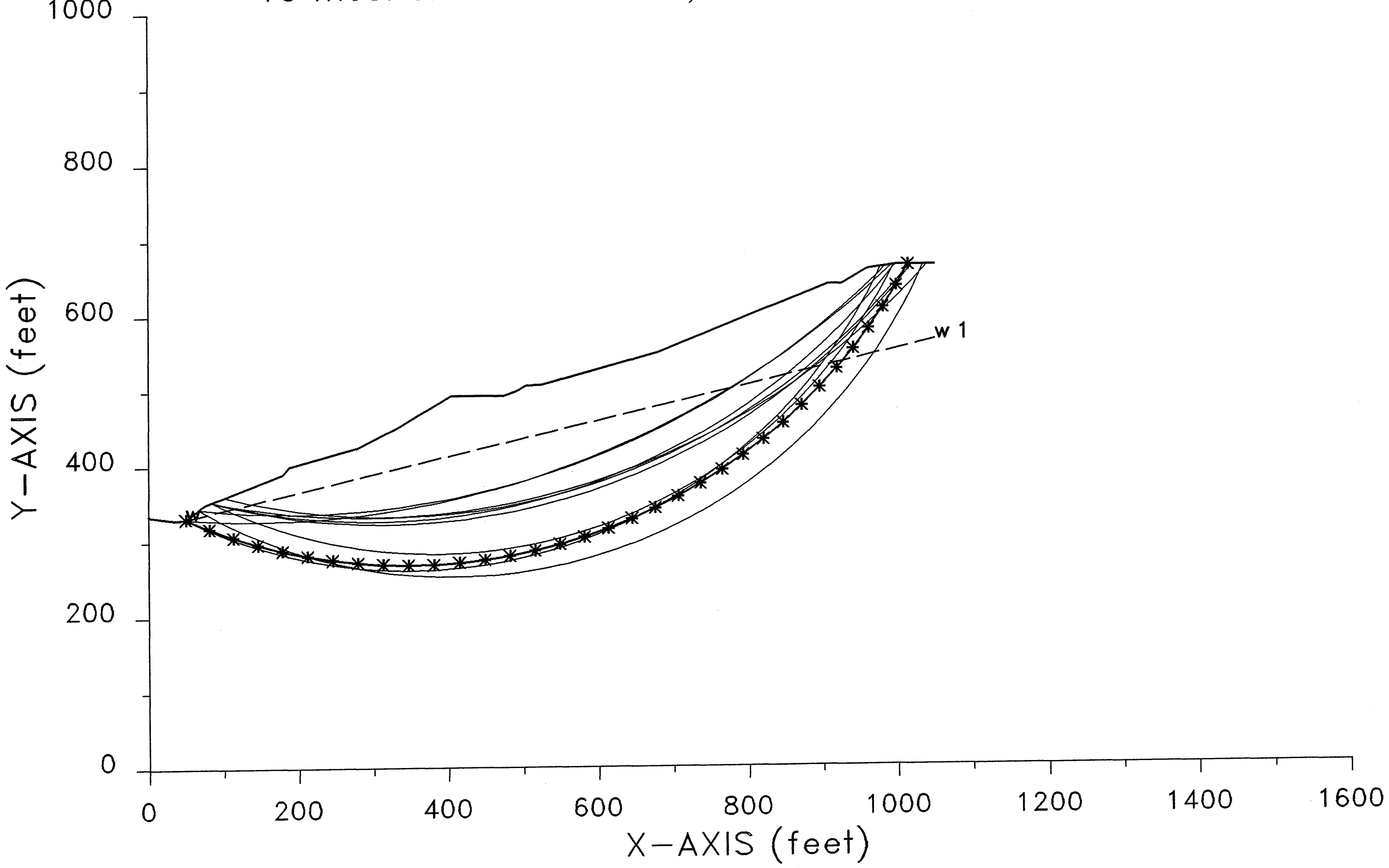
140 CONEJO RD, SB, SEC-A, GRS-CR,STT
10 most critical surfaces, MINIMUM BISHOP FOS = 1.605



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Problem Description : **140 CONEJO ROAD, SANTA BARBARA, DETERMINE FACTOR OF SAFETY ALONG CROSS-SECTION A-A, ASSUME CIRCULAR FAILURE, SEISMIC CONDITION**

SEGMENT BOUNDARY COORDINATES

----

20 SURFACE boundary segments

Segment No.	x-left (ft)	y-left (ft)	x-right (ft)	y-right (ft)	Soil Unit Below Segment
1	.0	335.0	35.0	330.0	1
2	35.0	330.0	50.0	331.0	1
3	50.0	331.0	75.0	350.0	1
4	75.0	350.0	180.0	390.0	1
5	180.0	390.0	188.0	400.0	1
6	188.0	400.0	280.0	425.0	1
7	280.0	425.0	310.0	440.0	1
8	310.0	440.0	330.0	450.0	1
9	330.0	450.0	405.0	494.0	1
10	405.0	494.0	475.0	494.0	1
11	475.0	494.0	492.0	500.0	1
12	492.0	500.0	505.0	507.0	1
13	505.0	507.0	525.0	508.0	1
14	525.0	508.0	680.0	550.0	1
15	680.0	550.0	805.0	600.0	1
16	805.0	600.0	907.0	640.0	1
17	907.0	640.0	925.0	640.0	1
18	925.0	640.0	960.0	660.0	1
19	960.0	660.0	1000.0	665.0	1
20	1000.0	665.0	1050.0	665.0	1

ISOTROPIC Soil Parameters
----

1 Soil unit(s) specified

Soil Unit No.	Unit Weight Moist (pcf)	Unit Weight Sat. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Parameter Ru	Pore Pressure Constant (psf)	Water Surface No.
1	121.8	123.9	771.0	30.00	.000	.0	1

1 Water surface(s) have been specified

Unit weight of water = 62.40 (pcf)

Water Surface No. 1 specified by 2 coordinate points

****
PHREATIC SURFACE,
****

Point No.	x-water (ft)	y-water (ft)
1	50.00	331.00
2	1050.00	565.00

A horizontal earthquake loading coefficient
of .150 has been assigned

A vertical earthquake loading coefficient
of .000 has been assigned

A critical failure surface searching method, using a random
technique for generating CIRCULAR surfaces has been specified.

500 trial surfaces will be generated and analyzed.

10 Surfaces initiate from each of 50 points equally spaced
along the ground surface between x = 50.0 ft
and x = 900.0 ft

Each surface terminates between x = 950.0 ft
and x = 1040.0 ft

Unless further limitations were imposed, the minimum elevation at which a surface extends is y = .0 ft

* * * * * DEFAULT SEGMENT LENGTH SELECTED BY XSTABL * * * * *

34.0 ft line segments define each trial failure surface.

Factors of safety have been calculated by the :

* * * * * SIMPLIFIED BISHOP METHOD * * * * *

The most critical circular failure surface is specified by 34 coordinate points

Point No.	x-surf (ft)	y-surf (ft)
1	50.00	331.00
2	81.50	318.20
3	113.54	306.83
4	146.07	296.92
5	179.00	288.48
6	212.28	281.54
7	245.85	276.10
8	279.62	272.17
9	313.53	269.77
10	347.52	268.90
11	381.52	269.57
12	415.45	271.76
13	449.24	275.48
14	482.84	280.71
15	516.16	287.46
16	549.15	295.69
17	581.73	305.41
18	613.84	316.58
19	645.42	329.18
20	676.40	343.20
21	706.71	358.59
22	736.30	375.34
23	765.11	393.40
24	793.07	412.74
25	820.14	433.32
26	846.25	455.10
27	871.35	478.03
28	895.40	502.07
29	918.33	527.16
30	940.12	553.27
31	960.71	580.32
32	980.06	608.28
33	998.13	637.08
34	1013.93	665.00

**** Simplified BISHOP FOS = 1.139 ****

The following is a summary of the TEN most critical surfaces

Problem Description : 140 CONEJO RD, SB, SEC-A, GRS-CR,SMC

	FOS (BISHOP)	Circle Center x-coord (ft)	Circle Center y-coord (ft)	Radius (ft)	Initial x-coord (ft)	Terminal x-coord (ft)	Resisting Moment (ft-lb)
1.	1.139	349.83	1023.76	754.86	50.00	1013.93	6.123E+09
2.	1.164	350.99	951.65	689.79	50.00	976.91	5.463E+09
3.	1.173	316.55	1216.88	893.79	84.69	1019.41	5.617E+09
4.	1.174	144.13	1563.76	1236.35	50.00	991.93	6.193E+09
5.	1.178	291.90	1337.85	1005.74	84.69	1039.35	6.170E+09
6.	1.184	301.01	1211.85	885.00	84.69	996.45	5.163E+09
7.	1.196	321.93	1225.23	892.44	102.04	1016.58	5.337E+09
8.	1.206	384.89	962.10	678.44	84.69	994.24	5.146E+09
9.	1.206	390.07	1091.75	773.73	119.39	1035.25	5.379E+09
10.	1.207	262.12	1298.34	961.17	84.69	983.11	5.016E+09

* * * END OF FILE * * *

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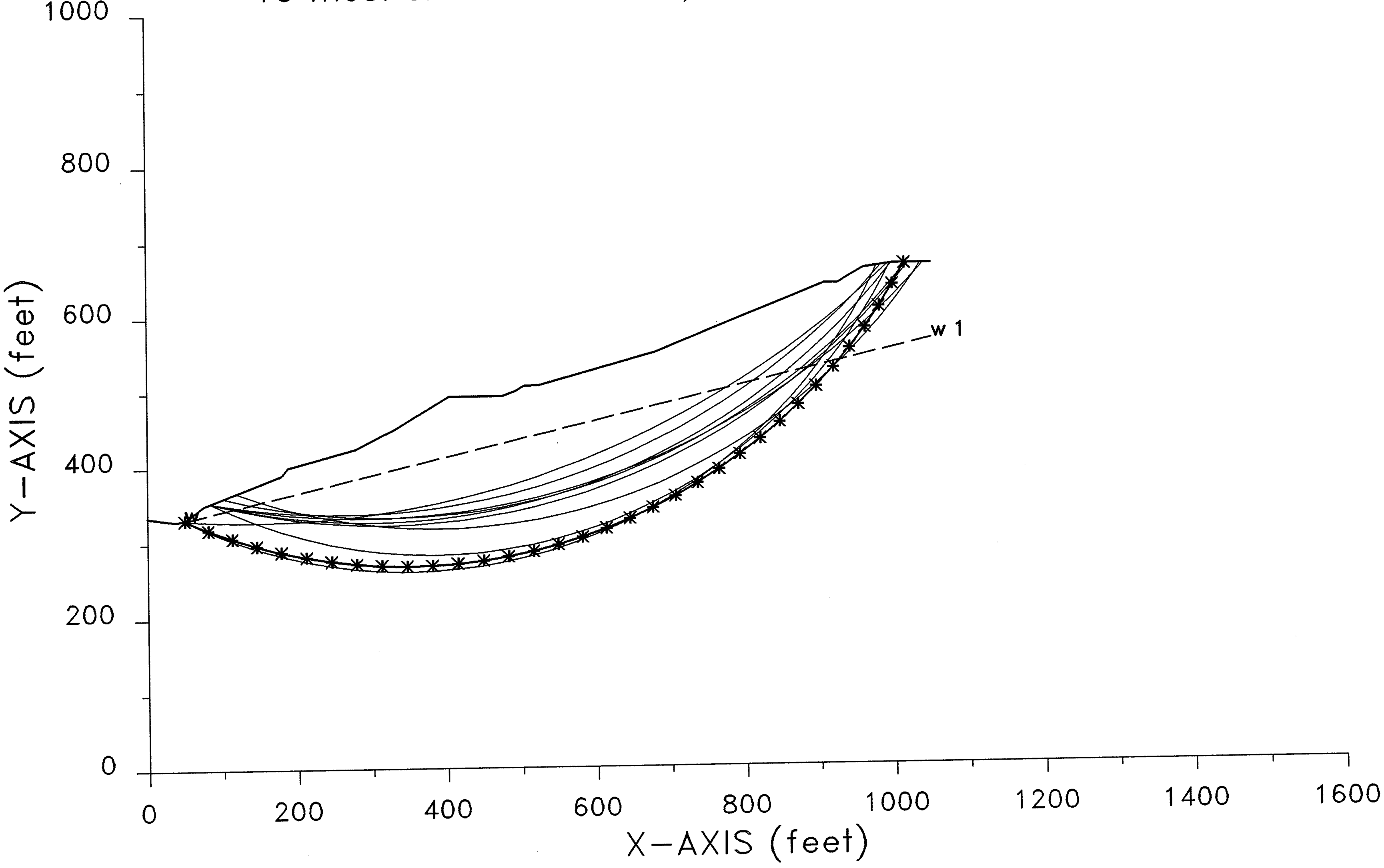
140 CONEJO RD, SB, SEC-A, GRS-CR,SMC
10 most critical surfaces, MINIMUM BISHOP FOS = 1.139



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*****************************************
```

Problem Description : **140 CONEJO ROAD, SANTA BARBARA, DETERMINE FACTOR OF SAFETY ALONG CROSS-SECTION A-A, PROPOSED ADJUSTED PARCEL TWO, ASSUME CIRCULAR FAILURE, STATIC CONDITION**

SEGMENT BOUNDARY COORDINATES
----

20 SURFACE boundary segments

Segment No.	x-left (ft)	y-left (ft)	x-right (ft)	y-right (ft)	Soil Unit Below Segment
1	.0	335.0	35.0	330.0	1
2	35.0	330.0	50.0	331.0	1
3	50.0	331.0	75.0	350.0	1
4	75.0	350.0	180.0	390.0	1
5	180.0	390.0	188.0	400.0	1
6	188.0	400.0	280.0	425.0	1
7	280.0	425.0	310.0	440.0	1
8	310.0	440.0	330.0	450.0	1
9	330.0	450.0	405.0	494.0	1
10	405.0	494.0	475.0	494.0	1
11	475.0	494.0	492.0	500.0	1
12	492.0	500.0	505.0	507.0	1
13	505.0	507.0	525.0	508.0	1
14	525.0	508.0	680.0	550.0	1
15	680.0	550.0	805.0	600.0	1
16	805.0	600.0	907.0	640.0	1
17	907.0	640.0	925.0	640.0	1
18	925.0	640.0	960.0	660.0	1
19	960.0	660.0	1000.0	665.0	1
20	1000.0	665.0	1050.0	665.0	1

ISOTROPIC Soil Parameters
----

1 Soil unit(s) specified

Soil Unit No.	Unit Weight Moist (pcf)	Unit Weight Sat. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Parameter Ru	Pore Pressure Constant (psf)	Water Surface No.
1	121.8	123.9	639.0	28.50	.000	.0	1

1 Water surface(s) have been specified

Unit weight of water = 62.40 (pcf)

Water Surface No. 1 specified by 2 coordinate points

****
PHREATIC SURFACE,
****

Point No.	x-water (ft)	y-water (ft)
1	50.00	331.00
2	1050.00	565.00

A critical failure surface searching method, using a random technique for generating CIRCULAR surfaces has been specified.

500 trial surfaces will be generated and analyzed.

10 Surfaces initiate from each of 50 points equally spaced along the ground surface between x = 475.0 ft
and x = 900.0 ft

Each surface terminates between x = 950.0 ft
and x = 1040.0 ft

Unless further limitations were imposed, the minimum elevation at which a surface extends is y = .0 ft

* * * * * DEFAULT SEGMENT LENGTH SELECTED BY XSTABL * * * * *

18.0 ft line segments define each trial failure surface.

Factors of safety have been calculated by the :

* * * * *   SIMPLIFIED BISHOP METHOD   * * * * *

The most critical circular failure surface
is specified by 27 coordinate points

Point No.	x-surf (ft)	y-surf (ft)
1	605.10	529.71
2	622.97	527.52
3	640.90	525.99
4	658.88	525.11
5	676.88	524.89
6	694.88	525.33
7	712.84	526.43
8	730.76	528.18
9	748.60	530.58
10	766.34	533.63
11	783.95	537.33
12	801.42	541.66
13	818.72	546.63
14	835.83	552.23
15	852.72	558.45
16	869.37	565.29
17	885.77	572.72
18	901.88	580.75
19	917.68	589.36
20	933.16	598.54
21	948.30	608.28
22	963.07	618.57
23	977.46	629.39
24	991.44	640.73
25	1005.00	652.57
26	1018.11	664.89
27	1018.22	665.00

**** Simplified BISHOP FOS =   2.115 ****

The following is a summary of the TEN most critical surfaces

Problem Description : 140 CONEJO RD, SB, SEC-A, APR-CR,STT

	FOS (BISHOP)	Circle Center x-coord (ft)	Circle Center y-coord (ft)	Radius (ft)	Initial x-coord (ft)	Terminal x-coord (ft)	Resisting Moment (ft-lb)
1.	2.115	673.88	1018.02	493.13	605.10	1018.22	6.620E+08

2.	2.116	678.28	1014.28	486.52	613.78	1016.85	6.234E+08
3.	2.116	657.89	1046.88	526.56	587.76	1020.37	7.465E+08
4.	2.117	671.25	937.95	425.41	579.08	997.16	6.336E+08
5.	2.118	661.73	1031.18	515.20	579.08	1024.13	8.040E+08
6.	2.118	674.60	977.69	464.96	579.08	1018.65	7.636E+08
7.	2.121	708.84	893.32	360.88	639.80	986.80	3.920E+08
8.	2.124	697.90	989.39	457.53	631.12	1020.44	5.800E+08
9.	2.128	624.65	1099.49	595.27	535.71	1031.50	1.075E+09
10.	2.128	617.26	1029.18	530.80	518.37	1003.34	9.209E+08

* * * END OF FILE * * *

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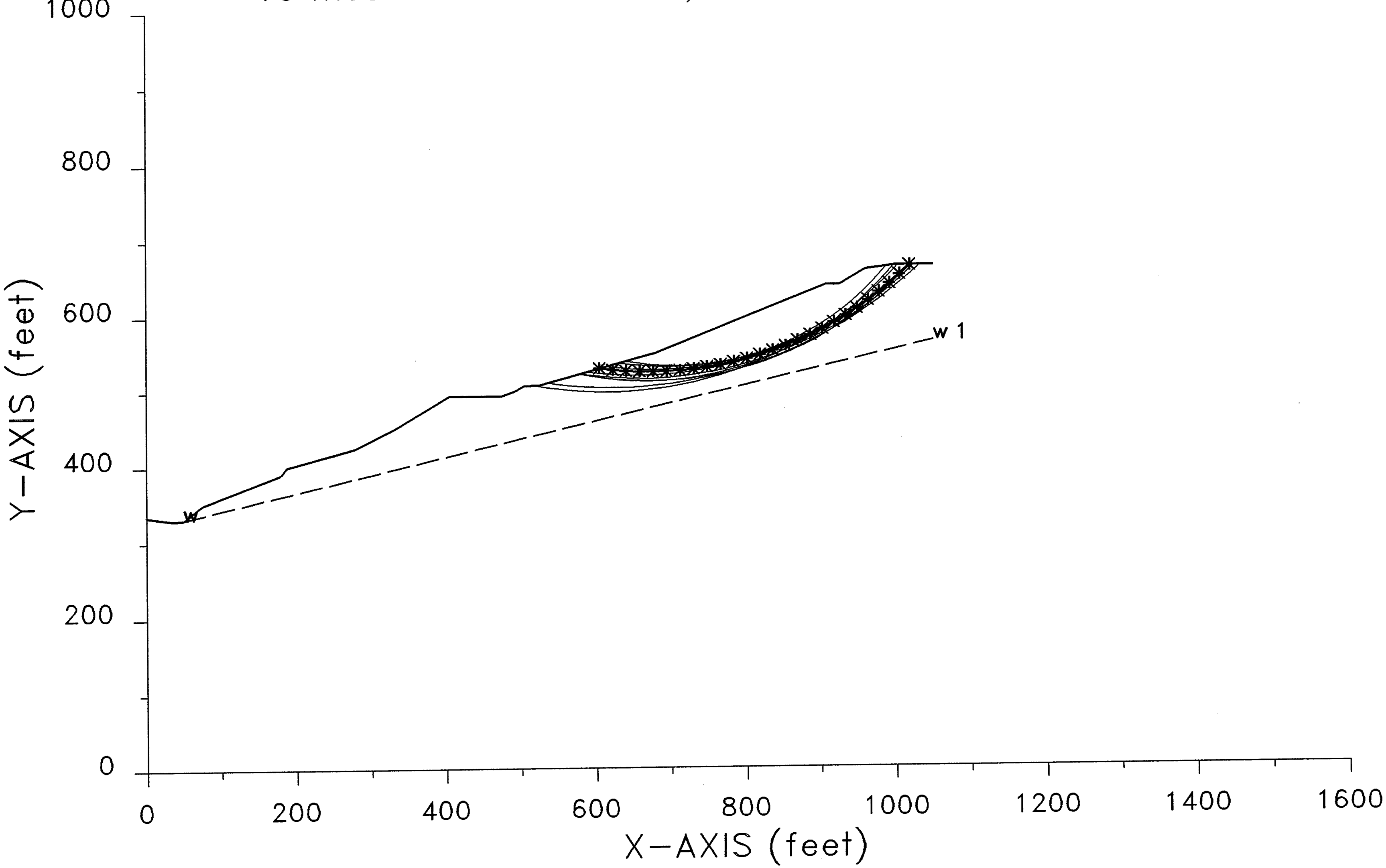
140 CONEJO RD, SB, SEC-A, APR-CR,STT
10 most critical surfaces, MINIMUM BISHOP FOS = 2.115



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Problem Description : **140 CONEJO ROAD, SANTA BARBARA, DETERMINE FACTOR OF SAFETY ALONG CROSS-SECTION A-A, PROPOSED ADJUSTED PARCEL TWO, ASSUME CIRCULAR FAILURE, SEISMIC CONDITION**

SEGMENT BOUNDARY COORDINATES
----

20 SURFACE boundary segments

Segment No.	x-left (ft)	y-left (ft)	x-right (ft)	y-right (ft)	Soil Unit Below Segment
1	.0	335.0	35.0	330.0	1
2	35.0	330.0	50.0	331.0	1
3	50.0	331.0	75.0	350.0	1
4	75.0	350.0	180.0	390.0	1
5	180.0	390.0	188.0	400.0	1
6	188.0	400.0	280.0	425.0	1
7	280.0	425.0	310.0	440.0	1
8	310.0	440.0	330.0	450.0	1
9	330.0	450.0	405.0	494.0	1
10	405.0	494.0	475.0	494.0	1
11	475.0	494.0	492.0	500.0	1
12	492.0	500.0	505.0	507.0	1
13	505.0	507.0	525.0	508.0	1
14	525.0	508.0	680.0	550.0	1
15	680.0	550.0	805.0	600.0	1
16	805.0	600.0	907.0	640.0	1
17	907.0	640.0	925.0	640.0	1
18	925.0	640.0	960.0	660.0	1
19	960.0	660.0	1000.0	665.0	1
20	1000.0	665.0	1050.0	665.0	1

ISOTROPIC Soil Parameters

1 Soil unit(s) specified

Soil Unit No.	Unit Weight Moist (pcf)	Unit Weight Sat. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Parameter Ru	Pore Pressure Constant (psf)	Water Surface No.
1	121.8	123.9	771.0	30.00	.000	.0	1

1 Water surface(s) have been specified

Unit weight of water = 62.40 (pcf)

Water Surface No. 1 specified by 2 coordinate points

****
PHREATIC SURFACE,
****

Point No.	x-water (ft)	y-water (ft)
1	50.00	331.00
2	1050.00	565.00

A horizontal earthquake loading coefficient
of .150 has been assigned

A vertical earthquake loading coefficient
of .000 has been assigned

A critical failure surface searching method, using a random
technique for generating CIRCULAR surfaces has been specified.

500 trial surfaces will be generated and analyzed.

10 Surfaces initiate from each of 50 points equally spaced
along the ground surface between x = 475.0 ft
and x = 900.0 ft

Each surface terminates between x = 950.0 ft
and x = 1040.0 ft

Unless further limitations were imposed, the minimum elevation
at which a surface extends is y = .0 ft

* * * * * DEFAULT SEGMENT LENGTH SELECTED BY XSTABL * * * * *

18.0 ft line segments define each trial failure surface.

Factors of safety have been calculated by the :

* * * * *   SIMPLIFIED BISHOP METHOD   * * * * *

The most critical circular failure surface
is specified by 35 coordinate points

Point No.	x-surf (ft)	y-surf (ft)
1	475.00	494.00
2	492.85	491.68
3	510.75	489.83
4	528.70	488.45
5	546.68	487.55
6	564.67	487.13
7	582.67	487.18
8	600.67	487.71
9	618.64	488.72
10	636.58	490.20
11	654.47	492.16
12	672.30	494.59
13	690.07	497.49
14	707.75	500.86
15	725.34	504.70
16	742.81	509.00
17	760.17	513.77
18	777.40	518.99
19	794.48	524.67
20	811.40	530.80
21	828.16	537.37
22	844.74	544.39
23	861.12	551.84
24	877.30	559.72
25	893.27	568.03
26	909.01	576.76
27	924.52	585.90
28	939.77	595.45
29	954.77	605.41
30	969.50	615.75
31	983.95	626.48
32	998.12	637.59
33	1011.98	649.08
34	1025.53	660.92
35	1029.95	665.00

**** Simplified BISHOP FOS =   1.564 ****

The following is a summary of the TEN most critical surfaces

Problem Description : 140 CONEJO RD, SB, SEC-A, APR-CR,SMC

	FOS (BISHOP)	Circle Center x-coord (ft)	Circle Center y-coord (ft)	Radius (ft)	Initial x-coord (ft)	Terminal x-coord (ft)	Resisting Moment (ft-lb)
1.	1.564	571.65	1166.54	679.45	475.00	1029.95	1.511E+09
2.	1.564	624.65	1099.49	595.27	535.71	1031.50	1.132E+09
3.	1.566	625.47	1119.45	615.13	535.71	1039.93	1.210E+09
4.	1.569	657.61	1024.02	519.05	553.06	1032.43	1.035E+09
5.	1.569	582.99	1189.31	695.06	492.35	1039.22	1.475E+09
6.	1.570	661.73	1031.18	515.20	579.08	1024.13	8.475E+08
7.	1.570	603.19	1068.53	579.05	492.35	1018.46	1.256E+09
8.	1.571	598.70	1151.77	649.09	518.37	1028.01	1.191E+09
9.	1.571	567.31	1186.23	694.23	483.67	1025.76	1.404E+09
10.	1.572	674.60	977.69	464.96	579.08	1018.65	8.039E+08

* * * END OF FILE * * *

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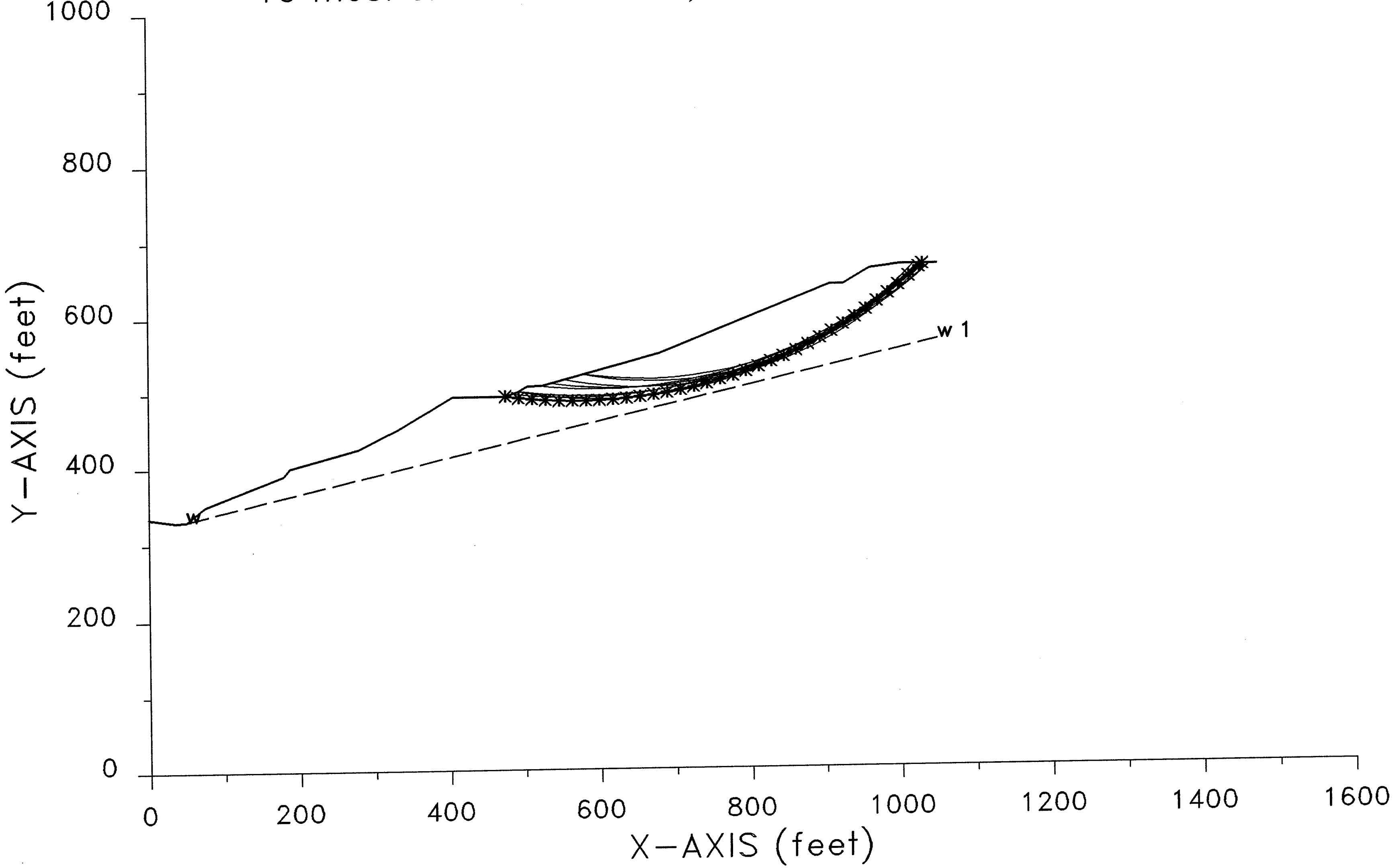
140 CONEJO RD, SB, SEC-A, APR-CR,SMC
10 most critical surfaces, MINIMUM BISHOP FOS = 1.564



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*                                        *
*        Slope Stability Analysis        *
*               using the                *
*            Method of Slices            *
*                                        *
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*  Ver. 5.206                96 - 1912   *
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Problem Description : **140 CONEJO ROAD, SANTA BARBARA, DETERMINE FACTOR OF SAFETY ALONG CROSS-SECTION A-A, USING LOWER BOUND COMPOSITE SHEAR STRENGTHS, ASSUME CIRCULAR FAILURE, STATIC CONDITION**

SEGMENT BOUNDARY COORDINATES
----

20 SURFACE boundary segments

Segment No.	x-left (ft)	y-left (ft)	x-right (ft)	y-right (ft)	Soil Unit Below Segment
1	.0	335.0	35.0	330.0	1
2	35.0	330.0	50.0	331.0	1
3	50.0	331.0	75.0	350.0	1
4	75.0	350.0	180.0	390.0	1
5	180.0	390.0	188.0	400.0	1
6	188.0	400.0	280.0	425.0	1
7	280.0	425.0	310.0	440.0	1
8	310.0	440.0	330.0	450.0	1
9	330.0	450.0	405.0	494.0	1
10	405.0	494.0	475.0	494.0	1
11	475.0	494.0	492.0	500.0	1
12	492.0	500.0	505.0	507.0	1
13	505.0	507.0	525.0	508.0	1
14	525.0	508.0	680.0	550.0	1
15	680.0	550.0	805.0	600.0	1
16	805.0	600.0	907.0	640.0	1
17	907.0	640.0	925.0	640.0	1
18	925.0	640.0	960.0	660.0	1
19	960.0	660.0	1000.0	665.0	1
20	1000.0	665.0	1050.0	665.0	1

ISOTROPIC Soil Parameters
----

1 Soil unit(s) specified

Soil Unit No.	Unit Weight Moist (pcf)	Unit Weight Sat. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Parameter Ru	Pore Pressure Constant (psf)	Water Surface No.
1	121.8	123.9	529.0	31.30	.000	.0	1

1 Water surface(s) have been specified

Unit weight of water = 62.40 (pcf)

Water Surface No. 1 specified by 2 coordinate points

****
PHREATIC SURFACE,
****

Point No.	x-water (ft)	y-water (ft)
1	50.00	331.00
2	1050.00	565.00

A critical failure surface searching method, using a random technique for generating CIRCULAR surfaces has been specified.

500 trial surfaces will be generated and analyzed.

10 Surfaces initiate from each of 50 points equally spaced along the ground surface between x = 50.0 ft
and x = 900.0 ft

Each surface terminates between x = 950.0 ft
and x = 1040.0 ft

Unless further limitations were imposed, the minimum elevation at which a surface extends is y = .0 ft

* * * * * DEFAULT SEGMENT LENGTH SELECTED BY XSTABL * * * * *

34.0 ft line segments define each trial failure surface.

Factors of safety have been calculated by the :

* * * * *   SIMPLIFIED BISHOP METHOD   * * * * *

The most critical circular failure surface
is specified by 34 coordinate points

Point No.	x-surf (ft)	y-surf (ft)
1	50.00	331.00
2	81.50	318.20
3	113.54	306.83
4	146.07	296.92
5	179.00	288.48
6	212.28	281.54
7	245.85	276.10
8	279.62	272.17
9	313.53	269.77
10	347.52	268.90
11	381.52	269.57
12	415.45	271.76
13	449.24	275.48
14	482.84	280.71
15	516.16	287.46
16	549.15	295.69
17	581.73	305.41
18	613.84	316.58
19	645.42	329.18
20	676.40	343.20
21	706.71	358.59
22	736.30	375.34
23	765.11	393.40
24	793.07	412.74
25	820.14	433.32
26	846.25	455.10
27	871.35	478.03
28	895.40	502.07
29	918.33	527.16
30	940.12	553.27
31	960.71	580.32
32	980.06	608.28
33	998.13	637.08
34	1013.93	665.00

****   Simplified BISHOP FOS =   1.756   ****

The following is a summary of the TEN most critical surfaces

Problem Description : 140 CONEJO RD, SB, SEC-A, GRS-CR,STT

	FOS (BISHOP)	Circle Center x-coord (ft)	Circle Center y-coord (ft)	Radius (ft)	Initial x-coord (ft)	Terminal x-coord (ft)	Resisting Moment (ft-lb)
1.	1.756	349.83	1023.76	754.86	50.00	1013.93	6.508E+09
2.	1.782	144.13	1563.76	1236.35	50.00	991.93	6.495E+09
3.	1.791	350.99	951.65	689.79	50.00	976.91	5.797E+09
4.	1.804	316.55	1216.88	893.79	84.69	1019.41	5.934E+09
5.	1.813	291.90	1337.85	1005.74	84.69	1039.35	6.511E+09
6.	1.816	301.01	1211.85	885.00	84.69	996.45	5.443E+09
7.	1.836	194.12	1457.51	1120.52	67.35	984.09	5.772E+09
8.	1.838	321.93	1225.23	892.44	102.04	1016.58	5.627E+09
9.	1.843	262.12	1298.34	961.17	84.69	983.11	5.265E+09
10.	1.858	384.89	962.10	678.44	84.69	994.24	5.446E+09

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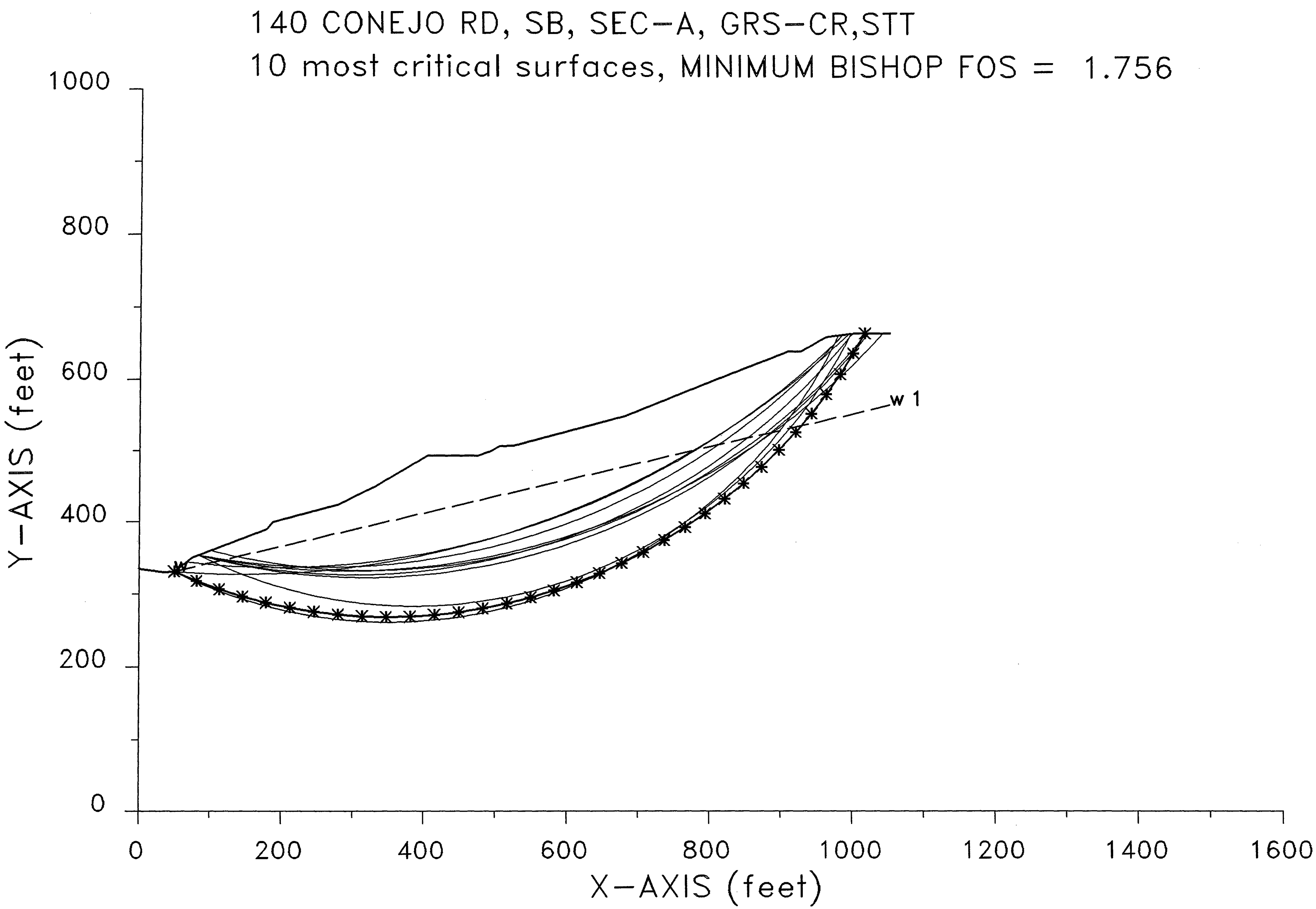

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*        Slope Stability Analysis       *
*               using the               *
*            Method of Slices           *
*                                       *
*        Copyright (C) 1992 - 2002      *
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*                                       *
*          All Rights Reserved          *
*                                       *
*  Ver. 5.206                96 - 1912  *
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Problem Description : **140 CONEJO ROAD, SANTA BARBARA, DETERMINE FACTOR OF SAFETY ALONG CROSS-SECTION A-A, PROPOSED ADJUSTED PARCEL TWO, USING LOWER BOUND COMPOSITE SHEAR STRENGTHS, ASSUME CIRCULAR FAILURE, STATIC CONDITION**

SEGMENT BOUNDARY COORDINATES

----

20 SURFACE boundary segments

Segment No.	x-left (ft)	y-left (ft)	x-right (ft)	y-right (ft)	Soil Unit Below Segment
1	.0	335.0	35.0	330.0	1
2	35.0	330.0	50.0	331.0	1
3	50.0	331.0	75.0	350.0	1
4	75.0	350.0	180.0	390.0	1
5	180.0	390.0	188.0	400.0	1
6	188.0	400.0	280.0	425.0	1
7	280.0	425.0	310.0	440.0	1
8	310.0	440.0	330.0	450.0	1
9	330.0	450.0	405.0	494.0	1
10	405.0	494.0	475.0	494.0	1
11	475.0	494.0	492.0	500.0	1
12	492.0	500.0	505.0	507.0	1
13	505.0	507.0	525.0	508.0	1
14	525.0	508.0	680.0	550.0	1
15	680.0	550.0	805.0	600.0	1
16	805.0	600.0	907.0	640.0	1
17	907.0	640.0	925.0	640.0	1
18	925.0	640.0	960.0	660.0	1
19	960.0	660.0	1000.0	665.0	1
20	1000.0	665.0	1050.0	665.0	1

ISOTROPIC Soil Parameters
----

1 Soil unit(s) specified

Soil Unit No.	Unit Weight Moist (pcf)	Unit Weight Sat. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Parameter Ru	Pore Pressure Constant (psf)	Water Surface No.
1	121.8	123.9	529.0	31.30	.000	.0	1

1 Water surface(s) have been specified

Unit weight of water = 62.40 (pcf)

Water Surface No. 1 specified by 2 coordinate points

****
PHREATIC SURFACE,
****

Point No.	x-water (ft)	y-water (ft)
1	50.00	331.00
2	1050.00	565.00

A critical failure surface searching method, using a random technique for generating CIRCULAR surfaces has been specified.

500 trial surfaces will be generated and analyzed.

10 Surfaces initiate from each of 50 points equally spaced along the ground surface between x = 475.0 ft
and x = 900.0 ft

Each surface terminates between x = 950.0 ft
and x = 1040.0 ft

Unless further limitations were imposed, the minimum elevation at which a surface extends is y = .0 ft

* * * * * DEFAULT SEGMENT LENGTH SELECTED BY XSTABL * * * * *

18.0 ft line segments define each trial failure surface.

Factors of safety have been calculated by the :

* * * * *   SIMPLIFIED BISHOP METHOD   * * * * *

The most critical circular failure surface is specified by 25 coordinate points

Point No.	x-surf (ft)	y-surf (ft)
1	613.78	532.06
2	631.74	531.00
3	649.74	530.55
4	667.74	530.72
5	685.72	531.49
6	703.67	532.86
7	721.56	534.85
8	739.37	537.43
9	757.09	540.62
10	774.69	544.41
11	792.14	548.79
12	809.45	553.75
13	826.57	559.30
14	843.50	565.42
15	860.21	572.12
16	876.68	579.37
17	892.90	587.18
18	908.84	595.53
19	924.50	604.41
20	939.84	613.82
21	954.86	623.74
22	969.54	634.17
23	983.85	645.08
24	997.79	656.47
25	1007.53	665.00

**** Simplified BISHOP FOS =   2.230 ****

The following is a summary of the TEN most critical surfaces

Problem Description : 140 CONEJO RD, SB, SEC-A, APR-CR,STT

	FOS (BISHOP)	Circle Center x-coord (ft)	Circle Center y-coord (ft)	Radius (ft)	Initial x-coord (ft)	Terminal x-coord (ft)	Resisting Moment (ft-lb)
1.	2.230	653.96	1062.92	532.39	613.78	1007.53	6.076E+08
2.	2.234	678.28	1014.28	486.52	613.78	1016.85	6.582E+08
3.	2.235	708.84	893.32	360.88	639.80	986.80	4.130E+08
4.	2.236	673.88	1018.02	493.13	605.10	1018.22	6.998E+08

5.	2.238	657.89	1046.88	526.56	587.76	1020.37	7.896E+08
6.	2.246	697.90	989.39	457.53	631.12	1020.44	6.132E+08
7.	2.247	630.70	1020.76	500.77	579.08	980.57	5.723E+08
8.	2.248	671.25	937.95	425.41	579.08	997.16	6.727E+08
9.	2.248	661.73	1031.18	515.20	579.08	1024.13	8.536E+08
10.	2.255	674.60	977.69	464.96	579.08	1018.65	8.131E+08

* * * END OF FILE * * *

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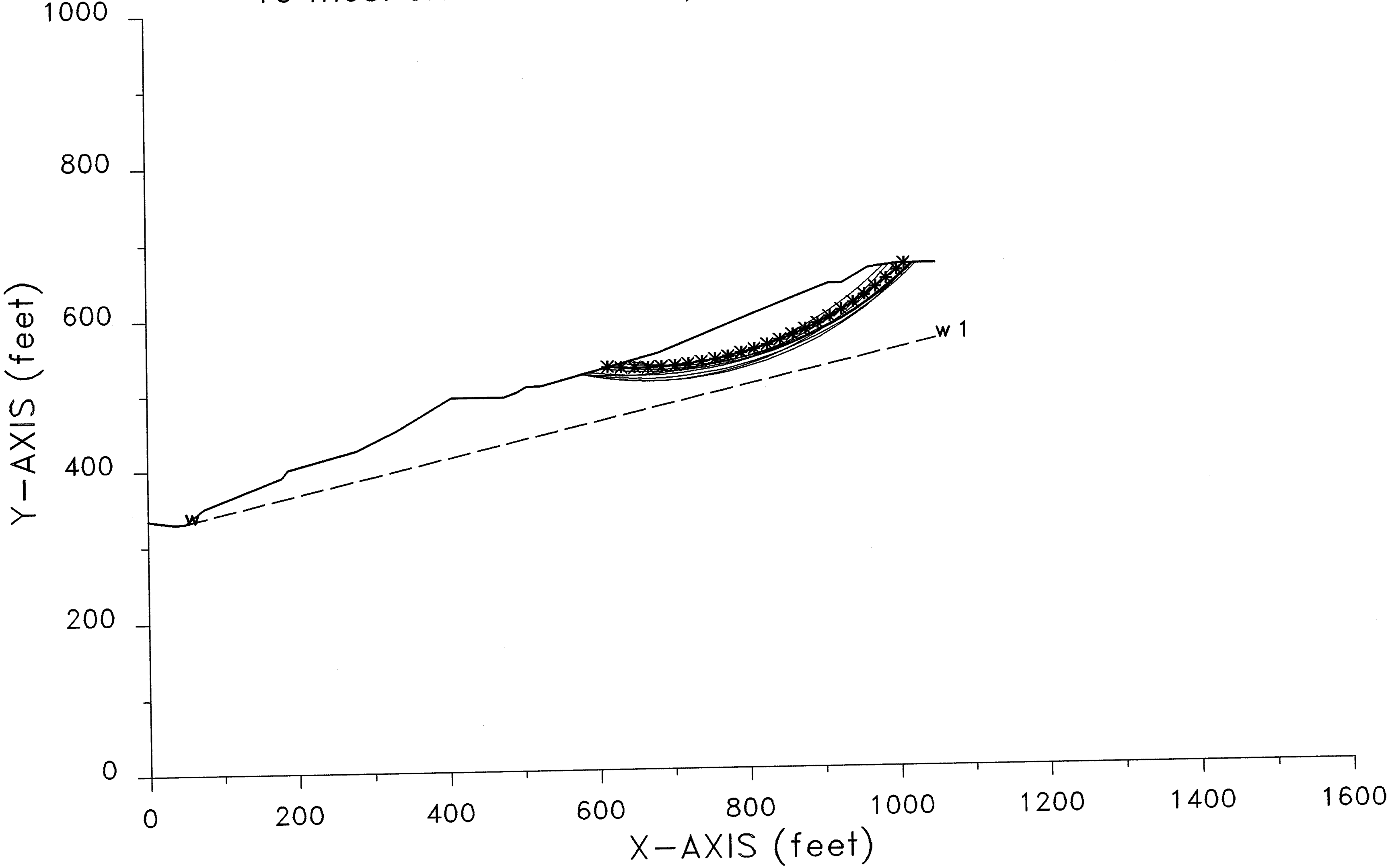
140 CONEJO RD, SB, SEC-A, APR-CR,STT
10 most critical surfaces, MINIMUM BISHOP FOS = 2.230



GEOLOGIC CROSS - SECTION A - A'

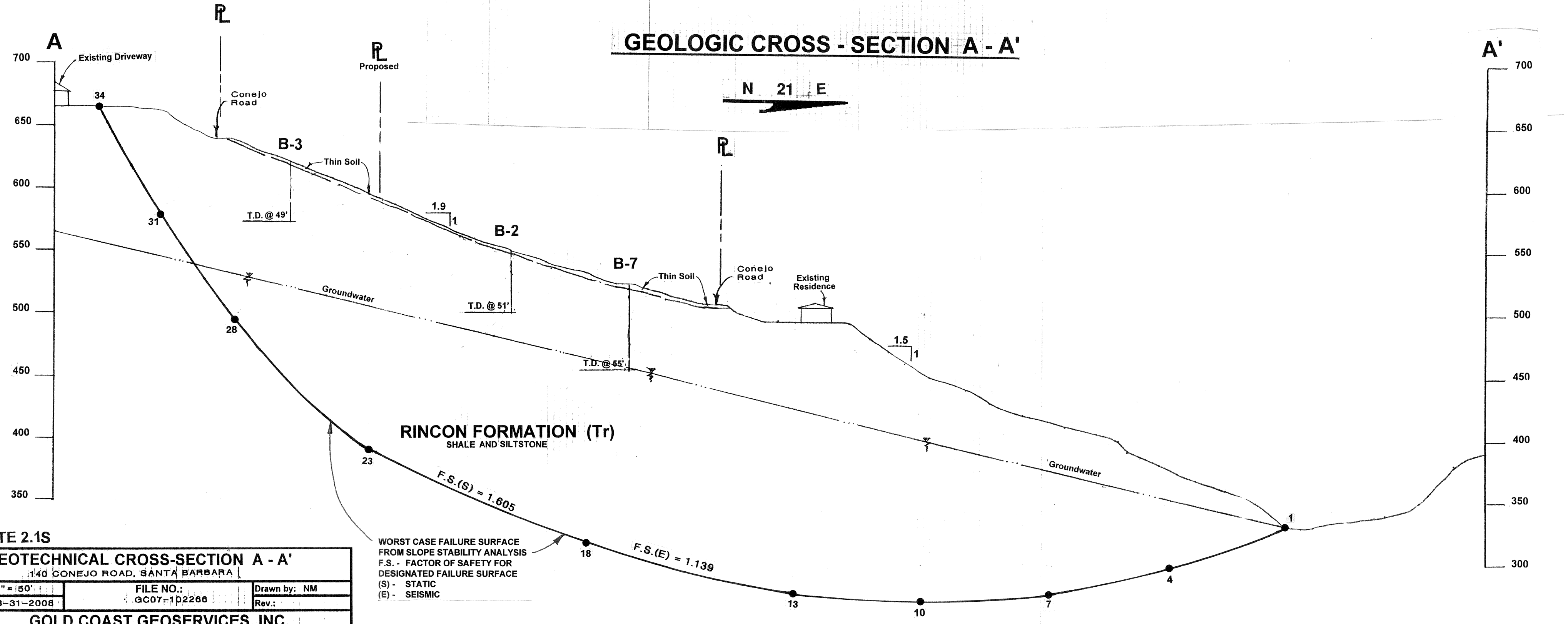


PLATE 2.1S

GEOTECHNICAL CROSS-SECTION A - A' 140 CONEJO ROAD, SANTA BARBARA		
Scale: 1" = 50'	FILE NO.: GC07-102266	Drawn by: NM
Date: 3-31-2008		Rev.:
GOLD COAST GEOSERVICES, INC. 5217 VERDUGO WAY, SUITE B * CAMARILLO, CA 93012 * (805) 484-5070 * FAX (805) 484-4295		

APPENDIX IV

CITY OF SANTA BARBARA CONEJO ROAD SLIDE REPORT

CALIFORNIA DIVISION OF MINES AND GEOLOGY

Fault Evaluation Report FER-31

April 11, 1977

1. Name of fault: Mission Ridge-Arroyo Parida fault (Santa Barbara County).

2. Location of fault: (See figure 1). Located in Santa Barbara County on the Santa Barbara, Carpinteria, and White Ledge Peak quadrangles. The eastern extension of this fault is discussed in FER-26 by T.C. Smith (1977).

3. Reason for evaluation: This fault lies in the 1976 study area of the 10-year program for fault evaluation in the state (see SP 42, 1977 edition, page 6). Also, this ~~these~~ fault ~~s~~ is ~~are~~ classified as potentially active by Santa Barbara County in their seismic safety element (Moore and Taber, 1974).

4. List of references:

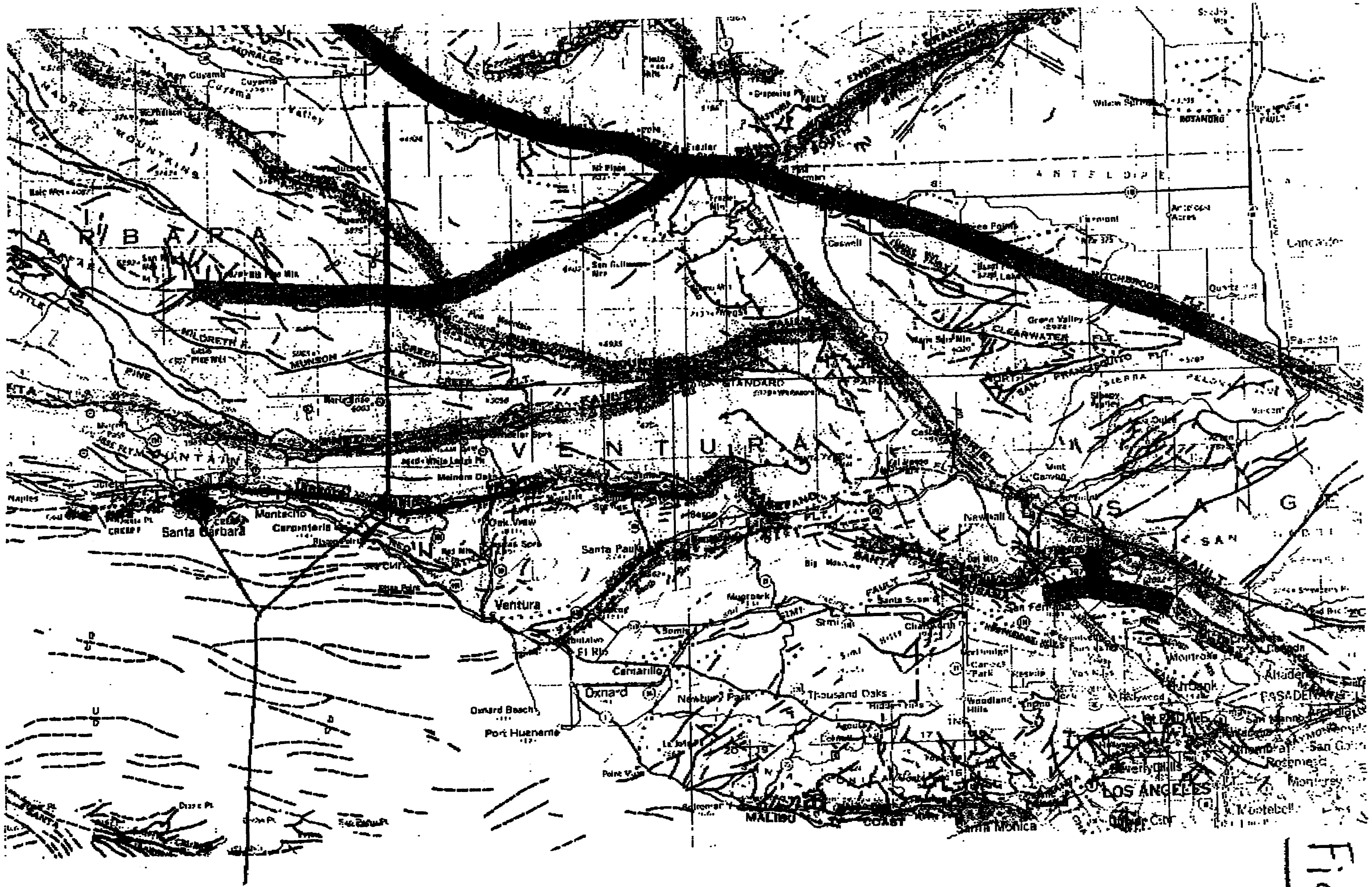
a) Dibblee, T.W., 1966, Geology of the central Santa Ynez Mountains: California Division of Mines and Geology, Bulletin 186, 99 p., plate 1 (scale 1:31,680).

b) Chauvel, J.P., 1958, Geology of the Arroyo-Parida fault, Santa Barbara and Ventura Counties: University of California at Los Angeles master's thesis, 62 p., plate 1 (scale 1:24,000).

c) Smith, T.C., 1977, The Arroyo Parida fault and Santa Ana fault in Ventura County, California Division of Mines and Geology, Fault Evaluation Report, FER-26 (unpublished file report).

d) Moore and Taber, 1974, Santa Barbara County comprehensive plan -- seismic safety element, 93 p.

Fig. 1

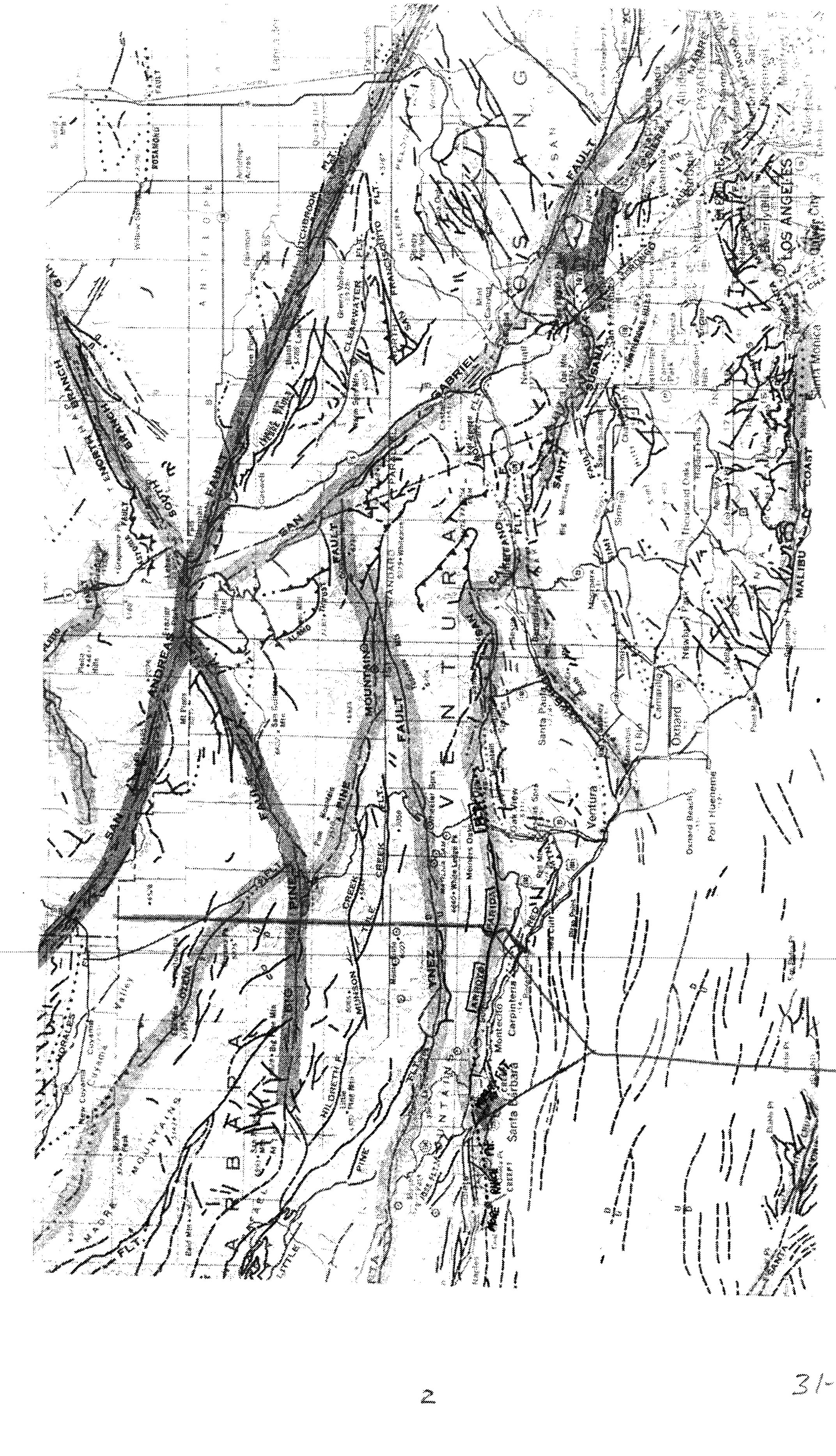


County line
Mission Ridge - Arroyo Parida fault

From Jennings (1975)

FER 31

Fig. 1



From Jennings (1975)

County line

Mission Ridge - Arroyo Parido fault

AREA COVERED IN This study

31-3

e) Geotechnical Consultants, 1974, Hydrogeologic investigation, Montecito ground water basins, for Montecito Water District, 64 p., plate 3 (scale 1:24,000).

f) Ziony, J.I., et al., 1974, Preliminary map showing recency of faulting in southern California: U.S. Geological Survey Map MF-585, scale 1:250,000.

g) Jennings, C.W., 1975, Fault map of California: California Division of Mines and Geology, California Geologic Data Map Series, Map no. 1, scale 1:750,000.

h) Lian, H.M., 1952, The geology and paleontology of the Carpinteria district, Santa Barbara County, California: University of California at Los Angeles master's thesis, 178 p., plate 1 (scale 1:12,000).

i) Muir, K.S., 1968, Ground water reconnaissance of the Santa Barbara-Montecito area, Santa Barbara County, California: U.S. Geological Survey Water Supply Paper 1859-A, 28 p., plate 1 (scale 1:24,000).

j) NASA, U-2, false color IR photographs: Flight number 73-194, roll 01541, frames 6519-6521.

k) Dibblee, T.W., 1977, Personal communication of March 15, 1977.

5. <u>Summary of available data:</u>

The Mission Ridge-Arroyo Parida fault extends about 35 miles from its intersection with the Mesa and More Ranch faults on the west to the San Cayetano fault on the east (see figure 1). Only that portion of the fault lying within Santa Barbara County is described here.

The Mission Ridge-Arroyo Parida fault, described in this report, has been described as the Mission Ridge fault west of Montecito (Dibblee, 1966; Muir, 1968) and the Arroyo Parida fault to the east (Lian, 1952; Chauvel, 1958). The fault traces mapped by the principal workers are plotted on plates 1A, 1B, and 1C.

Dibblee mapped the Mission Ridge fault and shows it to be a vertical, dip-slip fault with the south side up. He shows the fault as concealed along most of its trace but ~~also~~ locally portrays it as inferred. ~~and~~ or well located. His evidence for faulting is based on an assumed offset of a Pleistocene fanglomerate (Qfg). This unit lies at a comparatively higher elevation on the crests of "Mission Ridge" and the hill east of Sycamore Canyon (plate 1A) south of the fault. Actually, Dibblee does not show the Qfg to be offset vertically on cross-section E-E' and only about 300 feet of offset is shown on his cross-section F-F'. He indicates the maximum vertical offset of the lower Miocene sediments to be 1500 feet. Dibblee shows the Qfg to be in fault contact with younger alluvial deposits at the western end of the fault. However, he states (personal communication, March 15, 1977) "The younger alluvium is probably depositional against the Qfg. No evidence of faulting was seen in the younger alluvium."

The western portion of the Mission Ridge fault is obscured by alluvium. Dibblee and Muir both show the fault continuing westward as the More Ranch fault (see figure 1). Dibblee noted that the Mission Ridge fault is aligned with the Arroyo Parida fault to the east but that the connection, if it exists, lies buried beneath the Montecito plain. Evidence of a ground water barrier in the Montecito plain indicates that these two faults connect at depth (Muir, 1968; Geotechnical Consultants, 1974). However, the youngest units shown by Muir to be an effective ground water barrier are early Pleistocene in age.

Chauvel describes the Arroyo Parida fault as steeply dipping to the north with the south side up relative to the north. However, he states that the principal movement along this fault is left-slip with a dip-slip component. The fault is best defined east of Toro Canyon (see plate 1B), where south-dipping beds of the Coldwater Sandstone (Eocene) are faulted against north-dipping beds of the Sespe Formation (Oligocene). Chauvel says that the best evidence for left-slip along the Arroyo Parida fault is the fact that many streams exhibit left-lateral offset ~~as~~ where they cross the trace of the fault. However, many streams that cross the fault show no offset at all. Dibblee (plate 2) shows 1500' of vertical displacement in the area of Toro Canyon. Chauvel suggests 2700' of vertical displacement and estimates a greater component of horizontal displacement. Lian found no evidence at all of horizontal displacement in the fault segment he mapped.

No evidence for Holocene movement along the Arroyo Parida fault has been found. In fact, Chauvel indicates there may be some surface evidence for lack of Holocene movement.

First he says that the fault-related topography was not very obvious other than the fact that the fault occupied several topographic lows. He says (p. 52) he did not encounter any fault-line scarps along the Arroyo Parida fault. He also stated (p. 44) that the fact that some streams show left-lateral offset in the vicinity of the fault and others do not may be evidence for a lack of Holocene ~~recent~~ movement. Of course the offset streams would have to be older than the non-offset streams for this to be true.

6. Interpretation of air photos:

The Arroyo Parida fault shows up on U-2 photos as a weakly defined topographic low except in areas covered by alluvium where no photo lineations could be seen. The Mission Ridge fault did not show any obvious features which could be detected on these photos.

7. Field observations:

The only possible evidence for Holocene activity on the Mission Ridge-Arroyo Parida fault was shown by Dibblee. He mapped the contact between Pleistocene famglomerate (Qfg) and Holocene alluvium as a fault (see plate 1A).

As stated in section five of this report, Dibblee did not indicate the younger alluvium to be faulted, but shown as depositional against the Qfg. Nevertheless, the area was checked at locality 1 and no evidence of faulting was seen either in the Qfg or the younger alluvium. He also described the alignment of north facing escarpments in Qfg at three localities. These localities are shown on plate 1A (see numbers 1, 2, 3). These escarpments are still visible but no evidence of faulting could be found at any of these localities.

8. Conclusions:

The Mission Ridge and Arroyo Parida faults have been shown to connect in the subsurface (Muir, 1968). The sense of movement is not well documented, however, dip-slip movement seems to be demonstrated, at least in the subsurface. Left-slip movement is postulated for the Arroyo Parida segment of the fault but cannot be unequivocally proven, [redacted].

No evidence of Holocene activity is shown along the Mission Ridge-Arroyo Parida fault. Chauvel, in fact, may have evidence for the lack of Holocene movement (see section 5 in this report).

9. Recommendations:

I recommend that the Mission Ridge-Arroyo Parida fault should not be zoned for special studies at this time.

10. Investigating geologist's name; date:

Edward J Bortugno

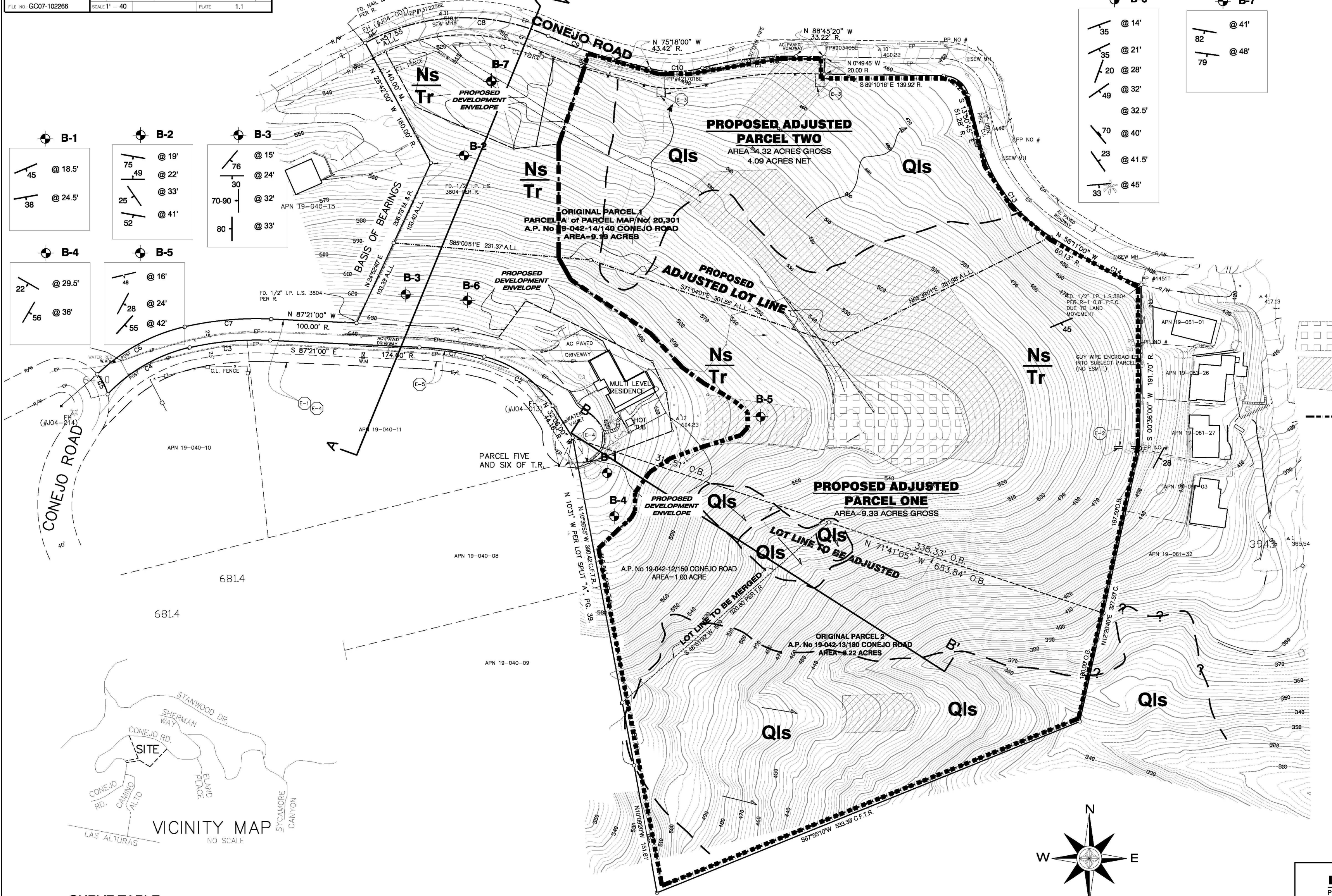
EDWARD J. BORTUGNO
Geologist
April 11, 1977

I concur with recommendations
Elliott
4/13/77

APPENDIX V

GEOLOGIC MAP, RESTRICTED USE AREA MAP, GEOLOGIC CROSS-SECTIONS, AND BORING LOGS

Note:	GOLD COAST GEOSERVICES, INC.
PLATE 1.1	GEOLOGIC MAP 140 CONEJO ROAD, SANTA BARBARA
DATE: 5-28-2009 / FILE NO.: GC07-102266	SIZE: D / SCALE: 1" = 40' / DWG NO.: GOTELLI / PLATE: 1.1



B-1: 45 @ 18.5'; 38 @ 24.5'

B-2: 75 @ 19'; 49 @ 22'; 25 @ 33'; 52 @ 41'

B-3: @ 15'; 76 @ 24'; 30; 70-90 @ 32'; 80 @ 33'

B-4: 22 @ 29.5'; 56 @ 36'

B-5: 48 @ 16'; 28 @ 24'; 55 @ 42'

B-6: 35 @ 14'; 35 @ 21'; 20 @ 28'; 49 @ 32'; @ 32.5'; 70 @ 40'; 23 @ 41.5'; 33 @ 45'

B-7: 82 @ 41'; 79 @ 48'

OWNER / APPLICANT:

A.P.N. 019-042-12, 13 & 14/140,150 & 180 CONEJO ROAD
ANDREW GOTELLI
140 CONEJO RD.
SANTA BARBARA, CA 93103

PROJECT INFORMATION:

ORIGINAL PARCEL 1: A.P.N. 019-042-14/140 CONEJO ROAD:
9.45 ACRES GROSS/9.19 ACRES NET
ORIGINAL PARCEL SLOPE PER SBMC:28.15.080 35.96%
ORIGINAL PARCEL 2: A.P.N. 019-042-12/150 CONEJO ROAD &
A.P.N. 019-042-013/180 CONEJO ROAD=4.22 ACRES GROSS
ORIGINAL PARCEL SLOPE PER SBMC:28.15.080 65.6%

ADJUSTED PARCEL ONE: 9.33 ACRES GROSS/NET
ADJUSTED PARCEL SLOPE PER SBMC:28.15.080 48.2% +/-
ADJUSTED PARCEL ONE CONEJO RD. FRONTAGE =146.7'
ADJUSTED PARCEL ONE DEVELOPMENT ENVELOPE: 16,124
SQ.FT./AVERAGE SLOPE=20.0%

ADJUSTED PARCEL TWO: 4.32 ACRES GROSS/4.09 ACRES NET
ADJUSTED PARCEL SLOPE PER SBMC:28.15.080 33.3% +/-
ADJUSTED PARCEL TWO CONEJO RD. FRONTAGE =925'
ADJUSTED PARCEL TWO DEVELOPMENT ENVELOPE: 20,890
SQ.FT./AVERAGE SLOPE= 26.7%

AGENT:

ALICIA HARRISON
BROWNSTEIN HYATT FARBER SCHRECK, LLP.
21 E. Carrillo St.
Santa Barbara, CA, 93101
(805) 882-1442 PH (805) 965-4333 FAX

UTILITY DATA:

WATER - CITY OF SANTA BARBARA
SEWER - CITY OF SANTA BARBARA
POWER - SOUTHERN CALIFORNIA EDISON
GAS - S.C.G.C.
PHONE - VERIZON
CABLE - COX COMMUNICATIONS

ZONING DATA:

ZONE: A-1; G.P.D. - MAJOR HILLSIDE

AVERAGE SLOPE DATA:

= INDICATES AREA OF AVERAGE SLOPE BETWEEN 10%-20%

= INDICATES AREA OF AVERAGE SLOPE BETWEEN 20%-30%

= RESTRICTED USE AREA PER GOLD COAST GEOSCIENCES GEOLOGIC EXHIBIT DATED 8/1/2008

PROPOSED DEVELOPMENT ENVELOPES = THE AREAS INSIDE THE PROPOSED DEVELOPMENT ENVELOPES HAVE AN AVERAGE SLOPE BETWEEN 20%-30% (AS NOTED ABOVE).

NO HATCH PATTERN = ALL AREAS WITH NO HATCH PATTERN HAVE AN AVERAGE SLOPE EXCEEDING 30% (EXCEPT WITHIN THE PROPOSED DEVELOPMENT ENVELOPES)

GEOLOGIC LEGEND:

Qls LANDSLIDE (SOIL SLIP, SHALLOW EARTH SLUMP)
Ns NATIVE SOIL (RESIDUAL SOIL AND COLLUVIUM)
Tr RINCON FORMATION CLAY SHALE)
B-1 APPROXIMATE LOCATION OF EXPLORATORY BORING
45 STRIKE AND DIP OF BEDDING
28 STRIKE AND DIP OF FRACTURE
70 STRIKE AND DIP OF JOINT
GEOLOGIC CONTACT
A A' LINE OF GEOLOGIC CROSS-SECTION

CURVE TABLE

CURVE	RADIUS	LENGTH	DELTA
C1	400.34'	76.74'	10°59'00" R.
C2	130.60'	100.90'	44°16'00" R.
C3	350.23'	94.90'	15°31'30" R.
C4	190.43'	112.25'	33°46'25" R.
C5	55.00'	26.56'	27°41'15" R.
C6	215.43'	117.86'	31°20'48" R.
C7	375.53'	101.75'	15°31'30" R.
C8	240.00'	222.10'	53°01'20" R.
C9	478.19'	80.31'	09°37'20" R.
C10	120.00'	62.97'	30°04'00" R.
C11	382.61'	110.93'	16°36'40" R.
C12	30.11'	39.58'	75°19'30" R.
C13	189.76'	146.84'	44°20'15" R.
C14	220.48'	60.04'	15°36'10" R.

EASEMENT LEGEND:

E-1 = ROAD & UTILITY ESM'T PER CITY LOT SPLIT MAP BOOK "B", PAGE 4. (ITEM 4 OF T.R.)
E-2 = PUBLIC UTILITY ESM'T PER INST. No. 11186 FIELD IN BK. 798, PG. 174 OF O.R. RECORDED AUGUST 11, 1948 (ITEM 2 OF T.R.)
E-3 = PUBLIC UTILITY ESM'T PER INST. No. 9726 FIELD IN BK. 998, PG. 331 OF O.R. RECORDED JUNE 25, 1951 (ITEM 3 OF T.R.)
E-4 = PUBLIC UTILITY ESM'T PER INST. No. 81-7746 RECORDED FEBRUARY 24, 1981 (ITEM 5 OF T.R.)
E-5 = PUBLIC UTILITY ESM'T PER INST. No. 22519 FIELD IN BK. 1481, PG. 499 OF O.R.

REQUEST CERTIFICATE:

I HEREBY APPLY FOR THE APPROVAL OF THE MERGER AND LOT LINE ADJUSTMENT BETWEEN THE REAL PROPERTIES SHOWN ON THIS PLAT, AND CERTIFY THAT I AM THE AUTHORIZED AGENT OF SAID OWNERS, AND THAT THE INFORMATION SHOWN HEREON IS TRUE AND CORRECT TO THE BEST OF OUR KNOWLEDGE AND BELIEF.

ALICIA HARRISON (AGENT) DATE:
Brownstein Hyatt Farber Schreck, LLP.
21 E. Carrillo St.
Santa Barbara, CA, 93101
(805) 882-1442 PH (805) 564-6350 FAX

MAP LEGEND:

BASIS OF BEARINGS: PARCEL MAP No. 20,301 AS FILED IN BOOK 29, PAGES 80 & 81 OF PARCEL MAPS AND TITLE REPORT PREPARED BY EQUITY TITLE COMPANY.

TOPOGRAPHY AS SHOWN HEREON IS PER AERIAL MAPPING PROVIDED BY GOLDEN STATE AERIAL SURVEYS FROM PHOTOGRAPHY DATED 11-20-06. CONTOUR INTERVAL=2.0'

R. = RECORD PER PARCEL MAP No. 20,301
O.B. = ORIGINAL BOUNDARY
A.L.L. = ADJUSTED LOT LINE
E.P = EDGE OF PAVING
PP = POWER POLE
MHJ = MAN HOLE

BARRY J. WATERS PLS 6419 4/1/2009 DATE:

LOT LINE ADJUSTMENT EXHIBIT

PROPOSED MERGER AND LOT LINE ADJUSTMENT BETWEEN A.P. No.'s 19-042-12, 13 & 14/140,150 & 180 CONEJO ROAD; IN THE CITY AND COUNTY OF SANTA BARBARA, STATE OF CALIFORNIA

PREPARED FOR: DR. ANDREW W. GOTELLI
REQUESTED BY: BROWNSTEIN HYATT FARBER SCHRECK, LLP.
ATTN: ALICIA HARRISON
21 E. CARRILLO ST.
SANTA BARBARA, CA 93101

~ MAY 2009 ~

PREPARED BY:
WATERS LAND SURVEYING INC.
5553 HOLLISTER AVENUE - SUITES 7 & 8
GOLETA, CALIFORNIA 93117 (805) 967-4416

No.	DESCRIPTION OF REVISION	DATE:
1.	REVISED DEVELOPMENT ENVELOPES PER GOLD COAST GEOSCIENCE EXHIBIT DATED 8/1/2008	FEB. 2009
2.	CHANGED NAME OF MAP TO "LOT LINE ADJUSTMENT EXHIBIT" PER CITY REQUEST	MAY 2009

DRAWING NAME: GOTELLI AERIAL SURVEY.DWG
LDD PROJ: 26047
LAYOUT NAME: SHEET02-36X48

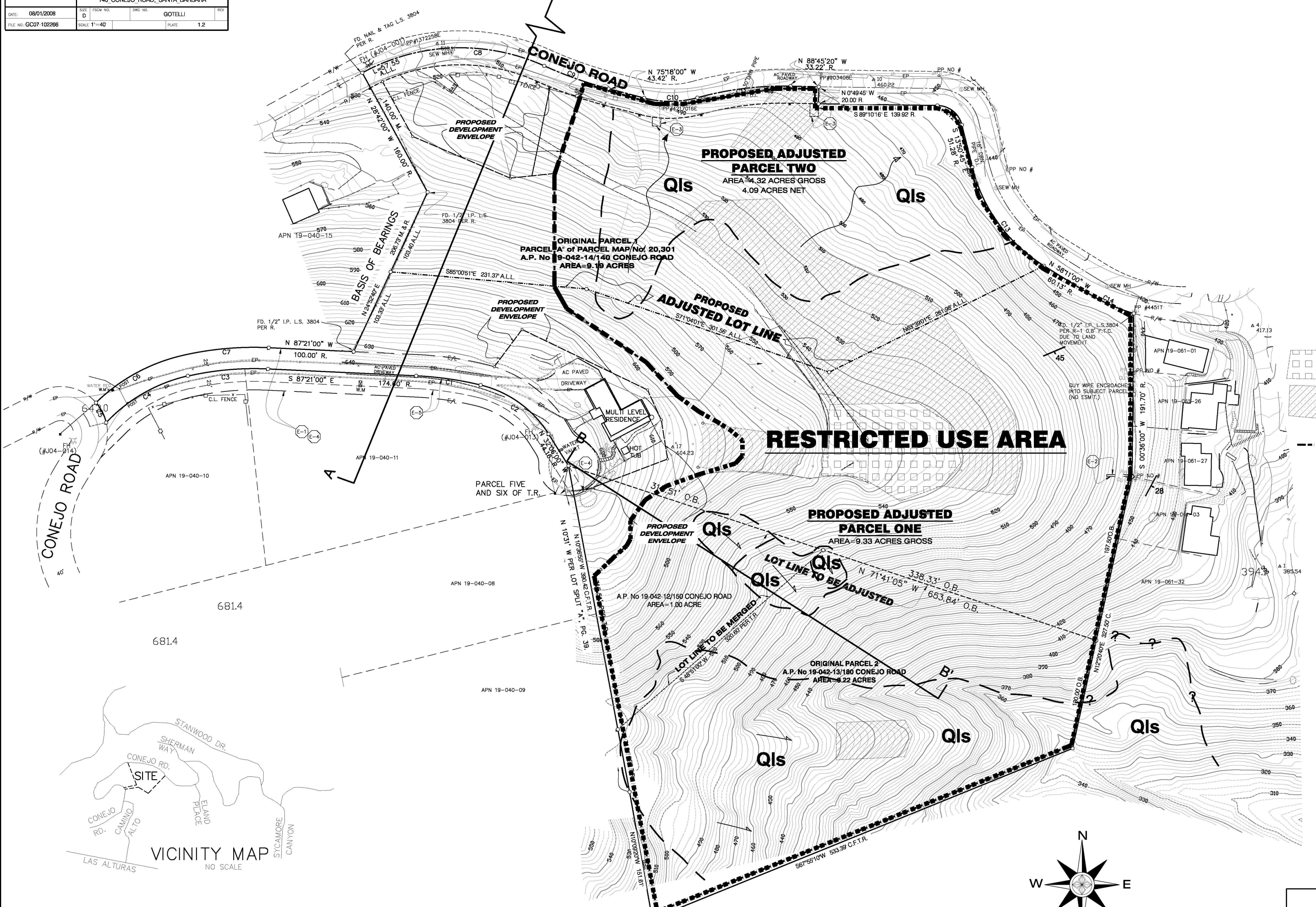
SCALE: 1' = 40' (0 40 80 120 160)

PREPARED BY: WATERS LAND SURVEYING
LAND SURVEYOR: BARRY J. WATERS
DRAWN: BJW/GSAS
CHECKED:
DRAWING NAME: Gotelli TPM Feb 2009.dwg

CLIENT: DR. ANDREW GOTELLI

SCALE: 1" = 40' W.O. No. 26047 SHEET 1 OF 1 SHEETS

Note:	GOLD COAST GEOSERVICES, INC.			
PLATE1.2	RESTRICTED USE AREA 140_CONEJO_ROAD,_SANTA_BARBARA			
DATE: 08/01/2008	SIZE D	FSCM NO.	DWG NO. GOTELLI	REV
FILE NO.: GC07-102266	SCALE 1"=40'		PLATE 1.2	



OWNER / APPLICANT:

A.P.N. 019-042-12, 13 & 14/140,150 & 180 CONEJO ROAD
ANDREW GOTELLI
140 CONEJO RD.
SANTA BARBARA, CA 93103

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A.P.N. 019-042-013/180 CONEJO ROAD=4.22 ACRES GROSS
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ADJUSTED PARCEL TWO CONEJO RD. FRONTAGE =925'
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SQ.FT./AVERAGE SLOPE= 26.7%

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GEOLOGIC LEGEND:

Qls LANDSLIDE (SOIL SLIP, SHALLOW EARTH SLUMP)

GEOLOGIC CONTACT

A A' LINE OF GEOLOGIC CROSS-SECTION

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LICENSED LAND SURVEYOR BARRY J. WATERS No. 6419 Exp. 12-31-10 STATE OF CALIFORNIA

4/1/2009
BARRY J. WATERS PLS 6419 DATE:

LOT LINE ADJUSTMENT EXHIBIT

PROPOSED MERGER AND LOT LINE ADJUSTMENT BETWEEN A.P. No.'s 19-042-12, 13 & 14/140,150 & 180 CONEJO ROAD; IN THE CITY AND COUNTY OF SANTA BARBARA, STATE OF CALIFORNIA

PREPARED FOR: DR. ANDREW W. GOTELLI
REQUESTED BY: BROWNSTEIN HYATT FARBER SCHRECK, LLP.
ATTN: ALICIA HARRISON
21 E. CARRILLO ST.
SANTA BARBARA, CA 93101

~ MAY 2009 ~

PREPARED BY:
WATERS LAND SURVEYING INC.
WLS
5553 HOLLISTER AVENUE - SUITES 7 & 8
GOLETA, CALIFORNIA 93117 (805) 967-4416

SCALE: 1" = 40' W.O. No. 26047 SHEET 1 OF 1 SHEETS

DRAWING NAME: GOTELLI AERIAL SURVEY.DWG
LDD PROJ: 26047
LAYOUT NAME: SHEET02-36X48

No.	DESCRIPTION OF REVISION	DATE:
1.	REVISED DEVELOPMENT ENVELOPES PER GOLD COAST GEOSCIENCE EXHIBIT DATED 8/1/2008	FEB. 2009
2.	CHANGED NAME OF MAP TO "LOT LINE ADJUSTMENT EXHIBIT" PER CITY REQUEST	MAY 2009

SCALE: 1' = 40'
0 40 80 120 160

PREPARED BY: WATERS LAND SURVEYING
LAND SURVEYOR: BARRY J. WATERS
DRAWN: BJW/GSAS
CHECKED:
DRAWING NAME: Gotelli RESTRICTED

CLIENT: DR. ANDREW GOTELLI

GEOLOGIC CROSS - SECTION A - A'

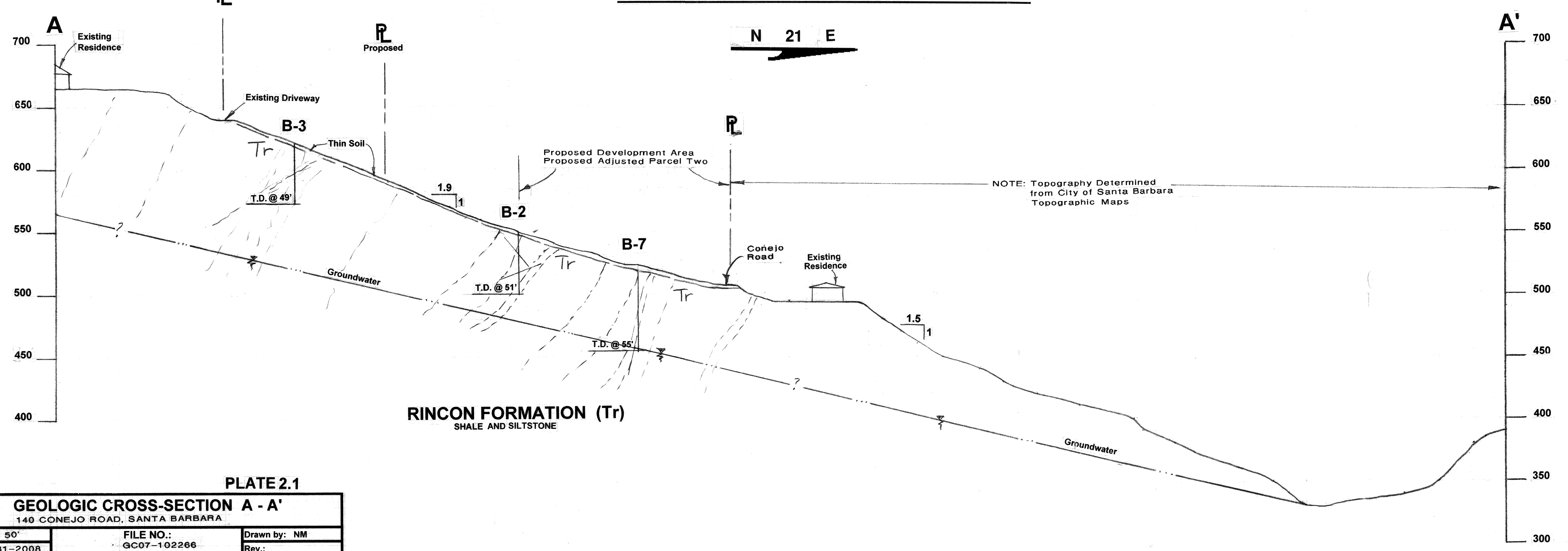


PLATE 2.1

GEOLOGIC CROSS-SECTION A - A' 140 CONEJO ROAD, SANTA BARBARA		
Scale: 1" = 50'	FILE NO.: GC07-102266	Drawn by: NM
Date: 3-31-2008		Rev.:

GOLD COAST GEOSERVICES, INC.

5217 VERDUGO WAY, SUITE B * CAMARILLO, CA 93012 * (805) 484-5070 * FAX (805) 484-4295

GEOLOGIC CROSS - SECTION B - B'

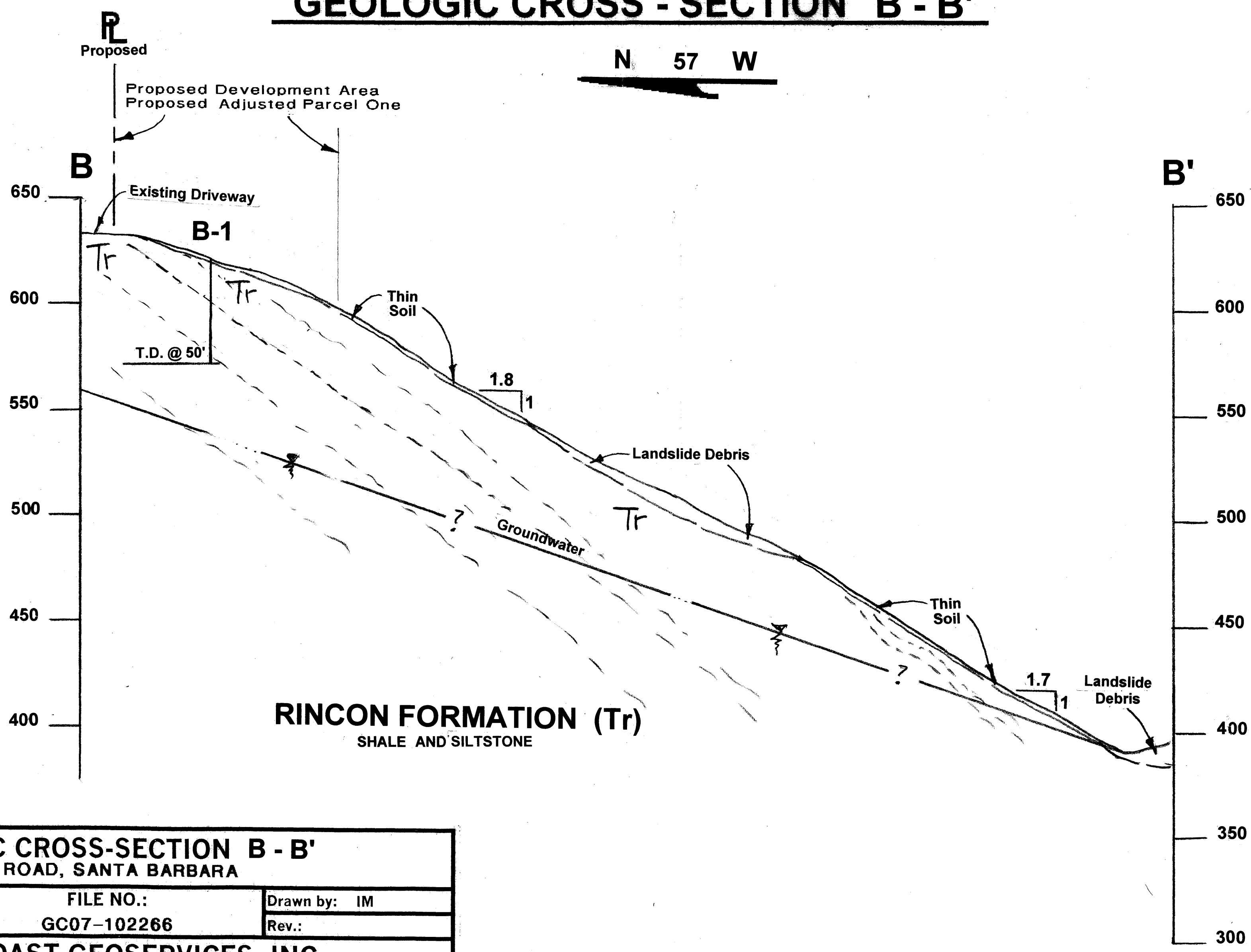


PLATE 2.2

GEOLOGIC CROSS-SECTION B - B' 140 CONEJO ROAD, SANTA BARBARA		
Scale: 1" = 40'	FILE NO.:	Drawn by: IM
Date: 2-5-2009	GC07-102266	Rev.:

GOLD COAST GEOSERVICES, INC.
5217 VERDUGO WAY, SUITE B * CAMARILLO, CA 93012 * (805) 484-5070 * FAX (805) 484-4295

GOLD COAST GEOSERVICES, INC.

SUB-SURFACE DATA

BORING NO. B-1

PROJECT: 140 Conejo Road, Santa Barbara
FILE NO.: GC07-102266
ELEVATION: See Plate 1
DATE: 01-26-2008
METHOD: 24" Flight Auger
DRILLING CO.: All Way Drilling

	SAMPLES		LAB DATA						
DEPTH (FT)	BULK	RING	MOISTURE %	DRY DENSITY	COHESION	FRICTION ANGLE	OPTIMUM MOISTURE	MAX. DENSITY	GRAPHIC LOG
0									
5		X	28.4	88.4					
10									
15									
20		X	24.2	98.1	639	28.5			
25									
30		X	24.2	98.6	764	29.7			
35									
40									

DESCRIPTION AND REMARKS

RESIDUAL SOIL - Ns - (0' - 1.5') - dark grayish brown silty clay, gravelly, very moist, medium firm.

RINCON FORMATION - Tr - (1.5' - 50')
@ 1.5' - 2' - mottled grayish brown and yellowish gray, weathered shale, very moist, medium firm.
@ 2' - 6' - light gray clayey siltstone to very fine sandy siltstone, microfractured, fractures filled with white clay, roots.
@ 3.5' - oxidized along fractures.
@ 4' - sandstone cobbles.
@ 6' sharp contact, horizontal.
@ 6' - 13' - dark yellowish brown sandy siltstone with gray sandstone cobbles.
@ 13' - 14' - light to medium gray and yellowish brown claystone, moist, very dense, micro fractured fine- to medium-grained sandstone, well jointed, random joints.
@ 17.5' - 18.5' - medium dense, moist, highly plastic claystone.
@ 18' - gray to reddish brown brecciated claystone.
@ 18'-3" - 3" thin white to pale gray "bentonitic clay", plastic
@ 18.5' - N67E, 45SE (b-?) bedding possible, no shearing-

@ 18.5' - 22' - yellowish brown to light grayish brown very fine sandy siltstone, moist, dense, fractured. slight seepage along fractures.
@ 22' - gray claystone, microfractured, moist, very dense, oxide staining along fractures, crude bedding with seepage.

@ 24.5 - sharp contact between gray siltstone and yellowish brown siltstone.
@ 24.5' - N80E, 38SE (b)

@ 37' - light brown clayey siltstone, moist, very stiff, massive.

COMMENTS:
b - strike and dip of bedding; **j** - strike and dip of joint

PLATE 3.1

GOLD COAST GEOSERVICES, INC.

SUB-SURFACE DATA — BORING NO. B-1

PROJECT: 140 Conejo Road, Santa Barbara — FILE NO.: GC07-102266

ELEVATION: See Plate 1 — DATE: 01-26-2008

METHOD: 24-inch Flight Auger — DRILLING CO.: All Way Drilling

	SAMPLES		LAB DATA							DESCRIPTION AND REMARKS
DEPTH (FT)	BULK	RING	MOISTURE %	DRY DENSITY	COHESION	FRICTION ANGLE	OPTIMUM MOISTURE	MAX. DENSITY	GRAPHIC LOG	
40										
-										
-										
-										
-										
45		X	26.2	89.8						
-										
-										
-										
-										
50										End @ 50'
-										
-										
-										
-										
55										
-										
-										
-										
-										
60										
-										
-										
-										
-										
65										
-										
-										
-										
-										
70										
-										
-										
-										
-										
75										
-										**TOTAL DEPTH : 50'**
-										**REFUSAL : NO**
-										**GROUNDWATER : Seepage @ 18' - 22'**
-										**CAVING : NO**
80										**BACKFILLED : YES**

COMMENTS:

b - strike and dip of bedding

PLATE 3.2

GOLD COAST GEOSERVICES, INC.

SUB-SURFACE DATA — BORING NO. B-2

PROJECT: 140 Conejo Road, Santa Barbara — FILE NO.: GC07-102266

ELEVATION: See Plate 1 — DATE: 03-12-2008

METHOD: 24" Flight Auger — DRILLING CO.: All Ways Drilling

	SAMPLES		LAB DATA							DESCRIPTION AND REMARKS
DEPTH (FT)	BULK	RING	MOISTURE %	DRY DENSITY	COHESION	FRICTION ANGLE	OPTIMUM MOISTURE	MAX. DENSITY	GRAPHIC LOG	
0										**RESIDUAL SOIL - Ns - (0' - 5')**
-										@ 0' - 2' - very dark grayish black silty clay, moist, medium firm.
-										@ 2' - 5' - mottled yellowish brown to light greenish brown, highly plastic silty clay, moist, medium firm.
-										
-										
5		X	31.0	90.2						**RINCON FORMATION - Tr - (5' - 51')**
-										@ 5' - sharp contact, dense to very dense grayish green to yellowish brown mottled claystone, moist, stiff.
-										
-										
-										
10		X	35.7	84.3						
-										
-										brecciated, high angle fractures, no open fractures
-										
-										
15										
-										
-										
-										
-										@19' - 37' - dark yellowish brown to grayish brown clay shale, fractured, moist, tight- to stiff, jointed, high angle jointing, closely spaced, 2" - 4" apart.
20		X	23.3	92.8						
-										
-										@ 19' - N80W, 75S (b)
-										@ 22' - slight seepage along fractures in brecciated clay shale.
-										@ 22' - EW, 49N (f)
25										
-										
-										
-										@ 28' - seepage in fractured claystone.
-										
30		X	20.2	100.2	987	28.0				@ 30' - becomes very dense, few factures, no seepage below 30'.
-										
-										
-										@ 33' - polished parting surfaces on tight fractures
-										@ 33' - N35W, 25SW (f)
35										
-										@ 37' - brecciated clay shale, very fractured, very dense, moist.
-										@ 38' - dark yellow, indurated siltstone, stratified, thinly bedded below 38'.
-										
-										
40		X	24.6	90.7						

COMMENTS:

b - strike and dip of bedding; **f** - strike and dip of fracture

GOLD COAST GEOSERVICES, INC.

SUB-SURFACE DATA — BORING NO. B-2

PROJECT: 140 Conejo Road, Santa Barbara | FILE NO.: GC07-102266

ELEVATION: See Plate 1 | DATE: 03-12-2008

METHOD: 24-inch Flight Auger | DRILLING CO.: All Ways Drilling

	SAMPLES		LAB DATA							DESCRIPTION AND REMARKS
DEPTH (FT)	BULK	RING	MOISTURE %	DRY DENSITY	COHESION	FRICTION ANGLE	OPTIMUM MOISTURE	MAX. DENSITY	GRAPHIC LOG	
40										@ 41' - N80W, 52S (b)
-										@44' - dark yellowish brown clay shale, very fractured, very moist, very dense.
45										
50		X	30.1	88.3						@51' - dark gray clayey siltstone (unoxidized), well-indurated, very dense, no seepage
55										
60										
65										
70										
75										
80										

TOTAL DEPTH : 51'
REFUSAL : NO
GROUNDWATER : Seepage @ 22', 28', and 44'-51'
CAVING : NO
BACKFILLED : YES

COMMENTS:

b - strike and dip of bedding

PLATE 3.4

GOLD COAST GEOSERVICES, INC.

SUB-SURFACE DATA — BORING NO. B-3

PROJECT: 140 Conejo Road, Santa Barbara — FILE NO.: GC07-102266

ELEVATION: See Plate 1 — DATE: 03-13-2008

METHOD: 24-inch Flight Auger — DRILLING CO.: All Ways Drilling

	SAMPLES		LAB DATA						DESCRIPTION AND REMARKS	
DEPTH (FT)	BULK	RING	MOISTURE %	DRY DENSITY	COHESION	FRICTION ANGLE	OPTIMUM MOISTURE	MAX. DENSITY	GRAPHIC LOG	
0										**RESIDUAL SOIL - Ns - (0' - 3.5')** @ 0' - 2.5' - dark brownish gray silty clay, with angular gravel, very moist, soft to medium firm. @ 2.5' - 3.5' - mottled dark brownish gray to yellowish brown silty clay, moist, medium dense to dense.
5										**RINCON FORMATION - Tr - (3.5' - 49')** @ 3.5' - 6' - mottled yellowish brown weathered clay shale, moist, dense to very dense.
10										@ 6' - 9' - thin rupture surface **N35E, 65SE**, closed fractures lined with white powdery calcification. Below 6', gray to medium gray claystone, very dense, near vertical iron oxide stained fractures. @ 9' - 12' - dark yellowish brown, very fine sandy siltstone, fractured, moist, very dense. @ 12' - 28' - less fractures, tight near vertical fractures filled with iron oxide, white powdery calcification, very dense, very fine sandy siltstone.
15										@ 15' - N40E, 76SE (f)
20										
25										@ 23' - 18" thick zone of brecciated claystone. @ 24' - complexly fractured, fractures striking NE, dipping 35^0-75^0 SE.
30										@ 27'-4" - 2" thick shear zone, light greenish gray to yellowish brown striated clay (EW, 30S), moist, plastic. @ 28' - 30' - very dense, medium to dark gray clayey siltstone. @ 30' - Dark yellowish brown, very dense siltstone, moist.
35										@ 32' - High angle fractures striking NE, dipping SE @ 70 - 90 degrees. @ 33' - NS, 80W (b-?)
40										

COMMENTS:

b - strike and dip of bedding; **f** - strike and dip of fracture

GOLD COAST GEOSERVICES, INC.

SUB-SURFACE DATA — BORING LOG NO. B-3

PROJECT: 140 Conejo Road, Santa Barbara — FILE NO.: GC07-102266

ELEVATION: See Plate 1 — DATE: 03-13-2008

METHOD: 24" Flight Auger — DRILLING CO.: All Ways Drilling

SAMPLES			LAB DATA							DESCRIPTION AND REMARKS
DEPTH (FT)	BULK	RING	MOISTURE %	DRY DENSITY	COHESION	FRICTION ANGLE	OPTIMUM MOISTURE	MAX. DENSITY	GRAPHIC LOG	
40										
-										
-										
-										
-										
45										
-										
-										
-										@49' - Medium gray tuffaceous sandy siltstone, humid, very
-										dense.
50										
-										
-										
-										
-										
55										
-										
-										
-										
-										
60										
-										
-										
-										
-										
65										
-										
-										
-										
-										
70										
-										
-										
-										
-										
75										
-										
-										
-										
-										
80										
-										
-										
-										
-										
85										TOTAL DEPTH : 49'
-										REFUSAL : NO
-										GROUNDWATER : NO
-										CAVING : NO
-										BACKFILLED : YES
90										

COMMENTS:

PLATE 3.6

GOLD COAST GEOSERVICES, INC.

SUB-SURFACE DATA — BORING NO. B-4

PROJECT: 140 Conejo Road, Santa Barbara	FILE NO.: GC07-102266
ELEVATION: See Plate 1	DATE: 03-13-2008
METHOD: 24" Flight Auger	DRILLING CO.: All Ways Drilling

DEPTH (FT)	SAMPLES: BULK	SAMPLES: RING	LAB DATA: MOISTURE %	DRY DENSITY	COHESION	FRICTION ANGLE	OPTIMUM MOISTURE	MAX. DENSITY	GRAPHIC LOG	DESCRIPTION AND REMARKS
0										**<u>RESIDUAL SOIL - Ns - (0' - 2.5')</u>** - dark grayish brown silty clay, very moist, medium firm.
										<u>RINCON FORMATION - Tr - (2.5' - 58')</u> @ 2.5' - 5.5' - mottled yellowish brown to grayish brown clay, moist, firm, weathered.
5										@ 5.5 -14' - medium gray claystone, fractured to very fractured, moist, stiff.
10										
										@ 14' - 28' - gray green to reddish brown claystone, very moist, very fractured.
15										
20										
										@ 28' - 29' - olive gray to gray clay shale, highly fractured, moist, very dense.
25										@ 29' - 3" thick pale yellowish green to olive gray bentonic clay, very moist, highly plastic. @ 29' - 36' - medium gray to reddish brown and gray clayey siltstone, moist, very dense, fractured. @ 29.5' - N60W, 22SW (f)
30										@ 36' - high angle fractures, closed fractures, iron oxide staining along fractures. @ 36' - N30E, 56SE (f) @ 36' - 40' - yellowish brown very fine sandy siltstone, moist, very dense, fractured.
35										**TOTAL DEPTH : 40'** **REFUSAL : NO** **GROUNDWATER : NO** **CAVING : NO**
40										**BACKFILLED : YES**

COMMENTS:

b - strike and dip of bedding; **f** - strike and dip of fracture

GOLD COAST GEOSERVICES, INC.

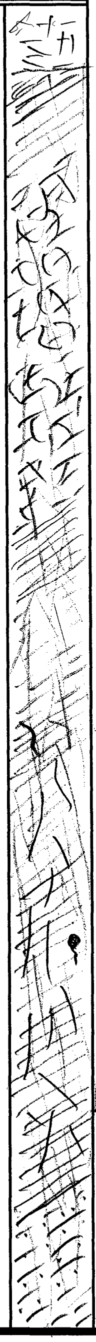
SUB-SURFACE DATA — BORING NO. B-5

PROJECT: 140 Conejo Road, Santa Barbara
FILE NO.: GC07-102266

ELEVATION: See Plate 1
DATE: 03-14-2008

METHOD: 24-inch Flight Auger
DRILLING CO.: All Ways Drilling

	SAMPLES		LAB DATA							DESCRIPTION AND REMARKS
DEPTH (FT)	BULK	RING	MOISTURE %	DRY DENSITY	COHESION	FRICTION ANGLE	OPTIMUM MOISTURE	MAX. DENSITY	GRAPHIC LOG	
0										**RESIDUAL SOIL - Ns - (0' - 2')** - dark grayish brown silty clay, very moist, medium firm, contains rootlets.
-										
-										**RINCON FORMATION - Tr - (2' - 49')**
-										@ 2' - 3.5' - dark yellowish brown claystone, very moist, firm.
5										@ 3.5' - 16' - yellowish brown to grayish brown brecciated clay shale, moist, stiff, tight fractures.
-										
-										
-										
-										
10										
-										
-										
-										
-										
15										@ 16' - N77E, 48SE (b-approximate)
-										@ 16' - 18' - grayish brown to reddish brown claystone, moist to very moist, stiff, fractured.
-										
-										
-										
20										
-										@ 22' - 37' - grayish and reddish brown claystone, moist, stiff, very fractured.
-										@ 24' - N28E, 59SE (j/f)
-										
-										
25										@ 29' - slight seepage.
-										
-										
-										
-										
30										
-										
-										
-										
-										
35										
-										@ 37' - 42.5' - yellowish brown sandy siltstone, moist, very dense, high angle fractures.
-										
-										
-										
40										



COMMENTS:

b - strike and dip of bedding; **j** - strike and dip of joint

PLATE 3.8

GOLD COAST GEOSERVICES, INC.

SUB-SURFACE DATA — BORING NO. B-5

PROJECT: 140 Conejo Road, Santa Barbara — FILE NO.: GC07-102266

ELEVATION: See Plate 1 — DATE: 03-14-2008

METHOD: 24-inch Flight Auger — DRILLING CO.: All Ways Drilling

	SAMPLES		LAB DATA							DESCRIPTION AND REMARKS
DEPTH (FT)	BULK	RING	MOISTURE %	DRY DENSITY	COHESION	FRICTION ANGLE	OPTIMUM MOISTURE	MAX. DENSITY	GRAPHIC LOG	
40										@ 42' - N80E, 55SE (b) @ 42.5' - 49' - medium grayish brown and reddish brown claystone, moist- to very moist, complex fractures, very dense.
45										
50										
55										
60										
65										
70										
75										**TOTAL DEPTH : 49'** **REFUSAL : NO** **GROUNDWATER : Seepage @ 29'** **CAVING : NO** **BACKFILLED : YES**
80										

COMMENTS:

b - strike and dip of bedding; **j** - strike and dip of joint; f - strike and dip of fracture

PLATE 3.9

GOLD COAST GEOSERVICES, INC.

SUB-SURFACE DATA — BORING NO. B-6

PROJECT: 140 Conejo Road, Santa Barbara — FILE NO.: GC07-102266

ELEVATION: See Plate 1 — DATE: 03-14-2008

METHOD: 24" Flight Auger — DRILLING CO.: All Ways Drilling

DEPTH (FT)	SAMPLES: BULK	SAMPLES: RING	LAB DATA: MOISTURE %	DRY DENSITY	COHESION	FRICTION ANGLE	OPTIMUM MOISTURE	MAX. DENSITY	GRAPHIC LOG

DESCRIPTION AND REMARKS

<u>RESIDUAL SOIL - Ns - (0' - 2.5')</u> - dark grayish brown silty clay, very moist, medium firm.

<u>RINCON FORMATION - Tr - (2.5' - 58')</u>
@ 2.5' - 5.5' - mottled yellowish brown to grayish brown clay shale, moist, firm, weathered .
@ 5.5 -14' - medium gray claystone, fractured to very fractured, moist, stiff.

@ 14' - 21' - light gray clayey siltstone, moist , stiff.
@ 14' - N70E, 35SE (b)

@ 21' - sharp contact, dark yellowish brown clayey siltstone.
@ 21' - N65E, 35SE (b)

@ 25' - 28' - yellowish brown clayey siltstone, stiff, moist.

@ 28' - 29.5' - laminated thin white calcareous veinlets,
@ 28' - N20E, 20SE (b)
@ 29.5' -32' - grayish brown claystone, moist, stiff.

@ 32' - 36' - micro-fractured siltstone.
@ 32' - N55E, 49SE (b).
@ 32.5' - thin oxidized shear surface, N25W, 28NE.

@ 36' - 37' - brecciated gray clayey siltstone, very dense, moist.
@ 37' - 38' - very dense, reddish brown silty sandstone, fractured.
@ 38' - 41.5' - green to yellowish gray tuffaceous sandstone, fractured.
@ 40' - N40W, 70E (j)

COMMENTS:

b - strike and dip of bedding; **j** - strike and dip of joint

GOLD COAST GEOSERVICES, INC.

SUB-SURFACE DATA — BORING NO. B-6

PROJECT: 140 Conejo Road, Santa Barbara — FILE NO.: GC07-102266

ELEVATION: See Plate 1 — DATE: 03-14-2008

METHOD: 24" Flight Auger — DRILLING CO.: All Ways Drilling

	SAMPLES		LAB DATA							DESCRIPTION AND REMARKS
DEPTH (FT)	BULK	RING	MOISTURE %	DRY DENSITY	COHESION	FRICTION ANGLE	OPTIMUM MOISTURE	MAX. DENSITY	GRAPHIC LOG	
40										
-										@ 41.5' - 47' - sharp contact, light gray tuffaceous sandstone,
-										moist, very dense.
-										@ 41.5' - N35W, 23NE (b)
-										
45										@ 45' - pale grayish brown to yellowish brown 0.5" clay bed.
-										Reddish brown basalt (?) below clay bed, N85E, 33S (f)
-										@47' - 49' - yellowish brown to gray claystone, hard, fractured.
-										@49' - 51' - yellowish brown clayey shale, humid, very dense.
-										
50										@51' - 58' -silty claystone, massive, moist, unfractured, very
-										dense.
-										
-										
-										
55										
-										
-										
-										
-										
60										
-										
-										
-										
-										
65										
-										
-										
-										
-										
70										
-										
-										
-										**TOTAL DEPTH : 58'**
-										**REFUSAL : NO**
75										**GROUNDWATER : NO**
-										**CAVING : NO**
-										**BACKFILLED : YES**
-										
-										
80										

COMMENTS: **Continue**

b - strike and dip of bedding; **s** - strike and dip of shear

GOLD COAST GEOSERVICES, INC.

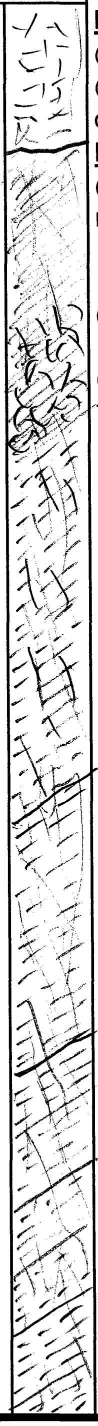
SUB-SURFACE DATA — BORING LOG NO. B-7

PROJECT: 140 Conejo Road, Santa Barbara — FILE NO.: GC07-102266

ELEVATION: See Plate 1 — DATE: 04-28-2008

METHOD: 24" Flight Auger — DRILLING CO.: All Ways Drilling

SAMPLES			LAB DATA							DESCRIPTION AND REMARKS
DEPTH (FT)	BULK	RING	MOISTURE %	DRY DENSITY	COHESION	FRICTION ANGLE	OPTIMUM MOISTURE	MAX. DENSITY	GRAPHIC LOG	
0										**RESIDUAL SOIL - Ns - (0' - 5')** @ 0' - 3' - dark grayish black silty clay, moist, stiff. @ 3' - 5' - mottled dark yellowish brown and grayish brown silty clay, moist, medium stiff.
5										**RINCON FORMATION - Tr - (2' - 55')** @ 5' - 17' - grayish green to yellowish brown mottled claystone, moist, stiff.
10										@ 11' - 17' - tight fractures, appears brecciated. @ 17' - 29' - yellowish brown to grayish brown clay shale, fractured, moist, stiff.
15										
20										
25										@ 29' - 39' - dark yellow siltstone, indurated, moist, very stiff.
30										
35										@ 39' - 53' - yellowish brown clay shale, stratified, thinly bedded, moist, very stiff.
40										
45										
50										



COMMENTS:

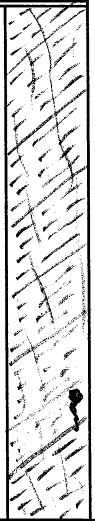
GOLD COAST GEOSERVICES, INC.

SUB-SURFACE DATA — BORING NO. B-7

PROJECT: 140 Conejo Road, Santa Barbara — FILE NO.: GC07-102266

ELEVATION: See Plate 1 — DATE: 04-28-2008

METHOD: 24" Flight Auger — DRILLING CO.: All Way Drilling

	SAMPLES		LAB DATA						DESCRIPTION AND REMARKS	
DEPTH (FT)	BULK	RING	MOISTURE %	DRY DENSITY	COHESION	FRICTION ANGLE	OPTIMUM MOISTURE	MAX. DENSITY	GRAPHIC LOG	
40										
-										@ 41' - N80W, 82SW (b)
-										
-										
-										
45										
-										
-										
-										@ 48' - N82W, 79SW (b)
-										
50										
-										
-										
-										@ 52' - seepage
-										@ 53' - 55' - dark gray clayey siltstone (unoxidized), very dense,
55										no seepage.
-										
-										
-										
-										
60										
-										
-										
-										
-										
65										
-										
-										
-										
-										
70										
-										
-										
-										
-										
75										
-										
-										
-										
-										
80										

TOTAL DEPTH : 55'
REFUSAL : NO
GROUNDWATER : NO
CAVING : NO
BACKFILLED : YES

COMMENTS:

b - strike and dip of bedding

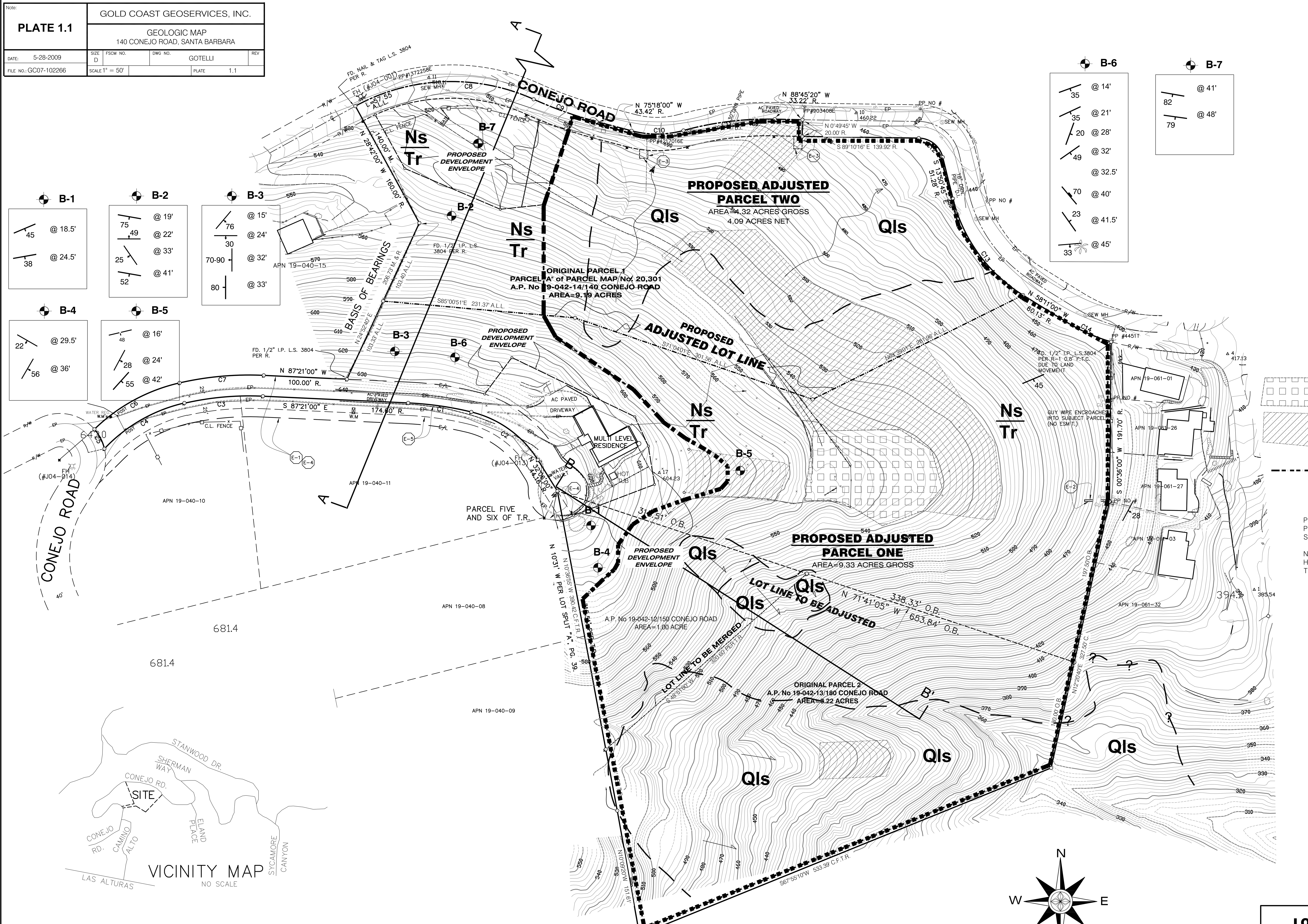
PLATE 3.13

PLATE 1.1

GOLD COAST GEOSERVICES, INC.

GEOLOGIC MAP
140 CONEJO ROAD, SANTA BARBARA

DATE: 5-28-2009 | SIZE: D | DWG NO.: GOTELLI
FILE NO.: GC07-102266 | SCALE: 1" = 50' | PLATE: 1.1



OWNER / APPLICANT:
A.P.N. 019-042-12, 13 & 14/140,150 & 180 CONEJO ROAD
ANDREW GOTELLI
140 CONEJO RD.
SANTA BARBARA, CA 93103

PROJECT INFORMATION:
ORIGINAL PARCEL 1: A.P.N. 019-042-14/140 CONEJO ROAD:
9.45 ACRES GROSS/9.19 ACRES NET
ORIGINAL PARCEL SLOPE PER SBMC:28.15.080 35.96%
ORIGINAL PARCEL 2: A.P.N. 019-042-12/150 CONEJO ROAD &
A.P.N. 019-042-013/180 CONEJO ROAD=4.22 ACRES GROSS
ORIGINAL PARCEL SLOPE PER SBMC:28.15.080 65.6%

ADJUSTED PARCEL ONE: 9.33 ACRES GROSS/NET
ADJUSTED PARCEL SLOPE PER SBMC:28.15.080 48.2% +/-
ADJUSTED PARCEL ONE CONEJO RD. FRONTAGE =146.7'
ADJUSTED PARCEL ONE DEVELOPMENT ENVELOPE: 16,124
SQ.FT./AVERAGE SLOPE=20.0%

ADJUSTED PARCEL TWO: 4.32 ACRES GROSS/4.09 ACRES NET
ADJUSTED PARCEL SLOPE PER SBMC:28.15.080 33.3% +/-
ADJUSTED PARCEL TWO CONEJO RD. FRONTAGE =925'
ADJUSTED PARCEL TWO DEVELOPMENT ENVELOPE: 20,890
SQ.FT./AVERAGE SLOPE= 26.7%

AGENT:
ALICIA HARRISON
BROWNSTEIN HYATT FARBER SCHRECK, LLP.
21 E. Carrillo St.
Santa Barbara, CA, 93101
(805) 882-1442 PH (805) 965-4333 FAX

UTILITY DATA:
WATER - CITY OF SANTA BARBARA
SEWER - CITY OF SANTA BARBARA
POWER - SOUTHERN CALIFORNIA EDISON
GAS - S.C.G.C.
PHONE - VERIZON
CABLE - COX COMMUNICATIONS

ZONING DATA:
ZONE: A-1; G.P.D. - MAJOR HILLSIDE

AVERAGE SLOPE DATA:
= INDICATES AREA OF AVERAGE SLOPE BETWEEN 10%-20%
= INDICATES AREA OF AVERAGE SLOPE BETWEEN 20%-30%
= RESTRICTED USE AREA PER GOLD COAST GEOSCIENCES GEOLOGIC EXHIBIT DATED 8/1/2008

PROPOSED DEVELOPMENT ENVELOPES = THE AREAS INSIDE THE PROPOSED DEVELOPMENT ENVELOPES HAVE AN AVERAGE SLOPE BETWEEN 20%-30% (AS NOTED ABOVE).

NO HATCH PATTERN = ALL AREAS WITH NO HATCH PATTERN HAVE AN AVERAGE SLOPE EXCEEDING 30% (EXCEPT WITHIN THE PROPOSED DEVELOPMENT ENVELOPES)

GEOLOGIC LEGEND:
Qls LANDSLIDE (SOIL SLIP, SHALLOW EARTH SLUMP)
Ns NATIVE SOIL (RESIDUAL SOIL AND COLLUVIUM)
Tr RINCON FORMATION CLAY SHALE)
B-1 APPROXIMATE LOCATION OF EXPLORATORY BORING
45 STRIKE AND DIP OF BEDDING
28 STRIKE AND DIP OF FRACTURE
70 STRIKE AND DIP OF JOINT
GEOLOGIC CONTACT
A A' LINE OF GEOLOGIC CROSS-SECTION

CURVE TABLE

CURVE	RADIUS	LENGTH	DELTA
C1	400.34'	76.74'	10°59'00" R.
C2	130.60'	100.90'	44°16'00" R.
C3	350.23'	94.90'	15°31'30" R.
C4	190.43'	112.25'	33°46'25" R.
C5	55.00'	26.56'	27°41'15" R.
C6	215.43'	117.86'	31°20'48" R.
C7	375.53'	101.75'	15°31'30" R.
C8	240.00'	222.10'	53°01'20" R.
C9	478.19'	80.31'	09°37'20" R.
C10	120.00'	62.97'	30°04'00" R.
C11	382.61'	110.93'	16°36'40" R.
C12	30.11'	39.58'	75°19'30" R.
C13	189.76'	146.84'	44°20'15" R.
C14	220.48'	60.04'	15°36'10" R.

EASEMENT LEGEND:
E-1 = ROAD & UTILITY ESM'T PER CITY LOT SPLIT MAP BOOK "B", PAGE 4. (ITEM 4 OF T.R.)
E-2 = PUBLIC UTILITY ESM'T PER INST. No. 11186 FIELD IN BK. 798, PG. 174 OF O.R. RECORDED AUGUST 11, 1948 (ITEM 2 OF T.R.)
E-3 = PUBLIC UTILITY ESM'T PER INST. No. 9726 FIELD IN BK. 998, PG. 331 OF O.R. RECORDED JUNE 25, 1951 (ITEM 3 OF T.R.)
E-4 = PUBLIC UTILITY ESM'T PER INST. No. 81-7746 RECORDED FEBRUARY 24, 1981 (ITEM 5 OF T.R.)
E-5 = PUBLIC UTILITY ESM'T PER INST. No. 22519 FIELD IN BK. 1481, PG. 499 OF O.R.

REQUEST CERTIFICATE:
I HEREBY APPLY FOR THE APPROVAL OF THE MERGER AND LOT LINE ADJUSTMENT BETWEEN THE REAL PROPERTIES SHOWN ON THIS PLAT, AND CERTIFY THAT I AM THE AUTHORIZED AGENT OF SAID OWNERS, AND THAT THE INFORMATION SHOWN HEREON IS TRUE AND CORRECT TO THE BEST OF OUR KNOWLEDGE AND BELIEF.

ALICIA HARRISON (AGENT) DATE:
Brownstein Hyatt Farber Schreck, LLP.
21 E. Carrillo St.
Santa Barbara, CA, 93101
(805) 882-1442 PH (805) 564-6350 FAX

MAP LEGEND:
BASIS OF BEARINGS: PARCEL MAP No. 20,301 AS FILED IN BOOK 29, PAGES 80 & 81 OF PARCEL MAPS AND TITLE REPORT PREPARED BY EQUITY TITLE COMPANY.

TOPOGRAPHY AS SHOWN HEREON IS PER AERIAL MAPPING PROVIDED BY GOLDEN STATE AERIAL SURVEYS FROM PHOTOGRAPHY DATED 11-20-06. CONTOUR INTERVAL=2.0'

R. = RECORD PER PARCEL MAP No. 20,301
O.B. = ORIGINAL BOUNDARY
A.L.L. = ADJUSTED LOT LINE
E.P = EDGE OF PAVING
PP = POWER POLE
MHJ = MAN HOLE

BARRY J. WATERS PLS 6419 DATE: 4/1/2009

LAND SURVEYOR BARRY J. WATERS No. 6419 Exp. 12-31-10 STATE OF CALIFORNIA

LOT LINE ADJUSTMENT EXHIBIT
PROPOSED MERGER AND LOT LINE ADJUSTMENT BETWEEN A.P. No.'s 19-042-12, 13 & 14/140,150 & 180 CONEJO ROAD; IN THE CITY AND COUNTY OF SANTA BARBARA, STATE OF CALIFORNIA

PREPARED FOR: DR. ANDREW W. GOTELLI
REQUESTED BY: BROWNSTEIN HYATT FARBER SCHRECK, LLP.
ATTN: ALICIA HARRISON
21 E. CARRILLO ST.
SANTA BARBARA, CA 93101

~ MAY 2009 ~

PREPARED BY:
WATERS LAND SURVEYING INC.
5553 HOLLISTER AVENUE - SUITES 7 & 8
GOLETA, CALIFORNIA 93117 (805) 967-4416

SCALE: 1" = 40' | W.O. No. 26047 | SHEET 1 OF 1 SHEETS

DRAWING NAME: GOTELLI AERIAL SURVEY.DWG
LDD PROJ: 26047
LAYOUT NAME: SHEET02-36X48

No.	DESCRIPTION OF REVISION	DATE:
1.	REVISED DEVELOPMENT ENVELOPES PER GOLD COAST GEOSCIENCE EXHIBIT DATED 8/1/2008	FEB. 2009
2.	CHANGED NAME OF MAP TO "LOT LINE ADJUSTMENT EXHIBIT" PER CITY REQUEST	MAY 2009

SCALE: 1' = 40'
0 40 80 120 160

PREPARED BY: WATERS LAND SURVEYING
LAND SURVEYOR: BARRY J. WATERS
DRAWN: BJW/GSAS
CHECKED:
DRAWING NAME: Gotelli TPM Feb 2009.dwg

CLIENT: DR. ANDREW GOTELLI